CDX-525RF

SERVICE MANUAL

US Model
Canadian Model
AEP Model
UK Model
E Model

Model Name Using Similar Mechanism	CDX-505RF
CD Drive Mechanism Type	MG-250C-137
Optical Pick-up Name	KSS-521A/J2N

SPECIFICATIONS

CD changer (CDX-525RF)

System	Compact disc digital audio system
Frequency response	10 – 20,000 Hz
Wow and flutter	Less than measurable limit
Signal-to-noise ratio	94 dB
Output terminals	BUS control output terminal (8 pins) Analog audio output terminal (RCA pin)
Current drain	800 mA (at playback) 800 mA (at disc loading / ejecting)
Operating temperature	–10°C to +55°C
Dimensions	Approx. 262 × 90 × 181.5 mm (w/h/d)
Mass	Approx. 2.1 kg

Hideaway unit

Frequency	88.3 MHz/88.5 MHz/ 88.7 MHz/88.9 MHz/ 89.1 MHz/89.3 MHz/ 89.5 MHz/89.7 MHz/ 89.9 MHz (switchable)
Dimensions	Approx. 124.8 × 30.0 × 99.8 mm (w/h/d)
Mass	Approx. 330 g

Wired remote (RM-X57)

Dimensions	Approx. 148 × 30 × 15 mm (w/h/d)
Mass	Approx. 120 g

Wireless remote (RM-X58)

Dimensions	Approx. 38.4 × 6.4 × 84.4 mm (w/h/d)
Mass	Approx. 20 g not incl. battery
Battery	Lithium battery (CR2025)

General

Supplied accessories	Disc magazine (1) Parts for installation and connections (1 set)

Design and specifications are subject to change without notice.

COMPACT DISC CHANGER SYSTEM

MICROFILM

SONY®

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SECTION 1
SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

Laser Diode Properites
- Material: GaAlAs
- Wavelength: 780 nm
- Emission Duration: continuous
- Laser Output Power: less than 44.6 µW*

  * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Flexible Circuit Board Repairing
- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Notes on chip component replacement
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Discard used batteries according to the manufacturer's instructions.

ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri
af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

ADVARSEL

Eksplosjonsfare ved feilaktig skifte av batteri.
Benytt samme batteritype eller en tilsvarende type
anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens
instruksjoner.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en likvärdig typ som
rekommenderas av apparattillverkaren.
Kassera använt batteri enligt gällande föreskrifter.

VAROITUS

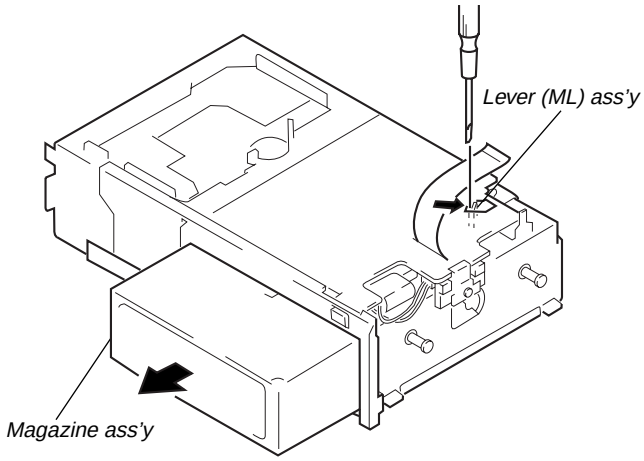
Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

DISC MAGAZINE GETTING OUT PROCEDURE ON THE POWER SUPPLY IS OFF

Remove the CASE (LOWER) assembly beforehand

1) Press the lever (ML) assy to arrow direction.
2) Removal the magazine assy.

Note: Take out the magazine only when the tray is completely within the magazine. If the disk or tray is sticking out, turn on the power and eject the magazine.



SECTION 2
GENERAL

This section is extracted from instruction manual.

Installation

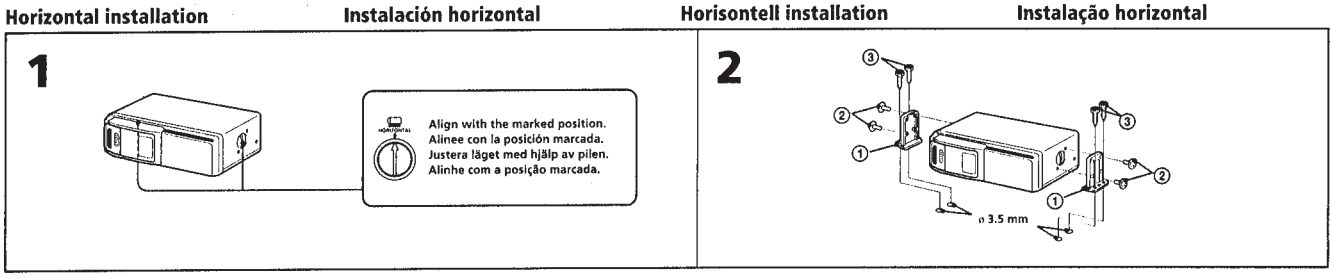
CD changer

- Choose the mounting location carefully, observing the following:
  - — Do not install the unit where it will be subjected to hot air from the heater.
  - — Do not install the unit where it will be subjected to direct sunlight.
  - — The fuel tank should not be damaged by the tapping screws.
  - — There should be no wire harnesses or pipelines under the place where you are going to install the unit.
  - — The spare tire, tools or other equipment in or under the trunk should not be interfered with or damaged by the screws or the unit itself.
- Be sure to use only the supplied mounting hardware for a safe and secure installation.
- Make holes of ø 3.5 mm only after making sure there is nothing on the other side of the mounting surface.

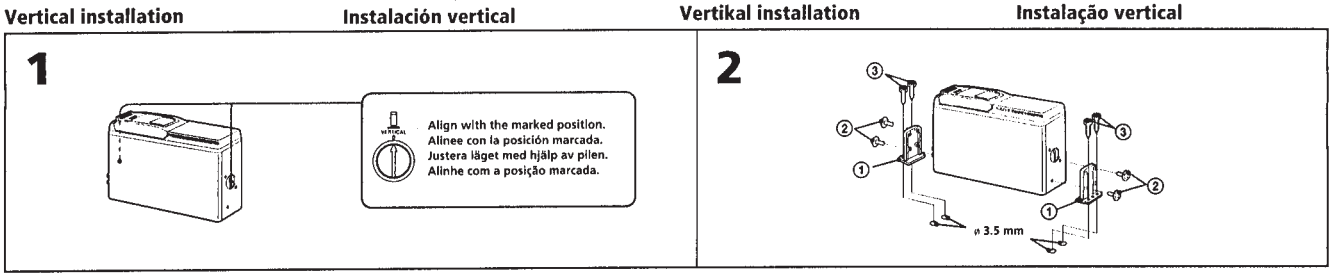
How to install the CD changer

When you install the CD changer, be careful not to damage wiring or equipment on the other side of the mounting surface.

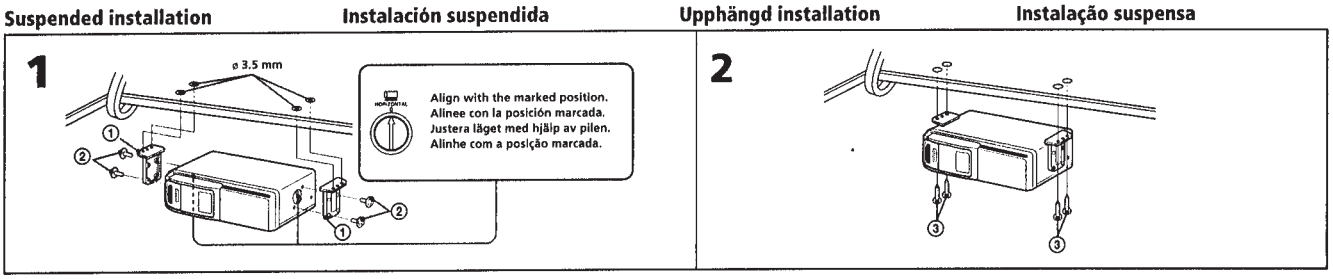
Horizontal installation



Vertical installation



Suspended installation

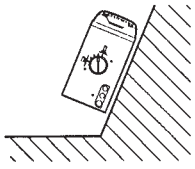


When the unit is to be installed under the rear tray or in the trunk, observe the following.

- Choose the mounting location carefully so that the unit can be installed horizontally.
- Make sure the unit does not hinder the movement of the torsion bar spring etc. of the trunk door.

Inclined installation

After installing the unit, align the dials with one of the marks so that the arrow comes as close to a vertical position as possible.



Note

Be sure to align the left and right dials with the same mark.

Instalación

Cambiador de discos compactos

- Elija cuidadosamente el lugar de montaje teniendo en cuenta lo siguiente:
  - — No instale la unidad donde pueda quedar sometida al aire cálido de la calefacción.
  - — No instale la unidad donde pueda quedar sometida a la luz solar directa.
  - — El depósito de combustible no deberá dañarse con los tornillos autorroscantes.
  - — No deberá haber cables ni tubos debajo del lugar en el que vaya a instalar la unidad.
  - — Ni los tornillos ni la propia unidad deberían dañar o interferir con la rueda de repuesto, las herramientas o demás equipos del portaequ ipajes o debajo del mismo.
- Para realizar una instalación firme y segura, cerciórese de utilizar solamente la ferretería de montaje suministrada.
- Antes de hacer los orificios de ø 3,5 mm, compruebe que no haya nada en el otro lado de la superficie de montaje.

Forma de instalar el cambiador de discos compactos

Cuando instale el cambiador de discos compactos, cerciórese de no dañar el cableado ni los equipos que puedan encontrarse en la otra parte de la superficie de montaje.

Instalación horizontal

Instalación vertical

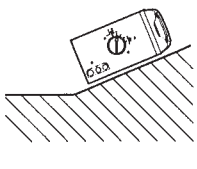
Instalación suspendida

Cuando vaya a instalar la unidad debajo de la bandeja trasera o en el portaequipajes, tenga en cuenta lo siguiente.

- Elija cuidadosamente el lugar de montaje de forma que la unidad pueda instalarse horizontalmente.
- Cerciórese de que la unidad no interfiera en el movimiento de la puerta del portaequipajes.

Instalación sobre una superficie inclinada

Después de instalar la unidad, alinee los diales con una de las marcas, de forma que la flecha quede orientada en posición vertical tanto como sea posible.



Nota

Asegúreses de alinear los diales derecho e izquierdo con la misma marca.

Installation

CD-växlaren

- Tänk på följande när du skall välja plats för apparaten:
  - — Installera inte enheten där den utsätts för utströmmande varmluft.
  - — Installera inte enheten där den utsätts för direkt solljus.
  - — Se till att du inte skadar bensintanken med skruvarna.
  - — Det får inte finnas några kablar eller ledningar direkt under den plats där du tänker installera apparaten.
  - — Reservhjul, verktyg eller annan utrustning i eller under bagagerutrymmet får inte komma i kontakt med eller skadas av skruvarna eller själva apparaten.
- Använd endast de monteringstillbehör som medföljer.
- Kontrollera först att det inte finns något på andra sidan monteringsytan som kan ta skada när du borrar hålen (ø 3,5 mm).

Installera CD-växlaren

Var försiktig så att du inte skadar kablar och utrustning på andra sidan av monteringsytan.

Horisontell installation

Vertikal installation

Upphängd installation

När du har montera apparaten, ställer du in pilen på skalskivan i en så lodrät position som möjligt.

Lutande installation

När du har montera apparaten, ställer du in pilen på skalskivan i en så lodrät position som möjligt.

Observera

Se till att du ställer in både vänster och höger skalskiva på samma sätt.

Instalação

Permutador de CD

- Escolha cuidadosamente o local de montagem, tendo em conta o seguinte:
  - — Não instale o aparelho num local onde possa ficar exposto ao ar quente proveniente do aquecedor.
  - — Não instale o aparelho num local onde possa ficar directamente exposto aos raios solares.
  - — Verifique se o depósito de combustível não corre o perigo de ser danificado pelos parafusos de rosca.
  - — Não podem existir cabos nem tubos sob o local onde instalou o aparelho.
  - — Os parafusos ou o aparelho não devem interferir com, nem danificar o pneu sobressalente, as ferramentas ou outro equipamento existente dentro ou por baixo do porta-bagagens.
- Para uma instalação segura, utilize apenas o material de montagem fornecido.
- Certifique-se de que não existe nada no lado de trás da superfície de montagem e faça furos com um diâmetro de 3,5 mm.

Como instalar o permutador de CD

Quando instalar o permutador de CD, tenha cuidado para não danificar os cabos ou o equipamento, que se encontre no outro lado da superfície de montagem.

Instalação horizontal

Instalação vertical

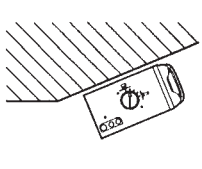
Instalação suspensa

Se pretender instalar o aparelho por baixo da prateleira de trás ou no porta-bagagens, tenha atenção ao seguinte:

- escolha cuidadosamente o local de montagem para que o aparelho possa ser instalado na horizontal.
- certifique-se de que o aparelho não interfere com o movimento da tampa do porta-bagagens.

Instalação inclinada

Depois de instalar o aparelho, alinhe botões rotativo com uma das marcas de modo a colocar a seta o mais próximo possível da posição vertical.



Nota

Não se esqueça de alinhar os botões rotativos da esquerda e da direita com a mesma marca.

Connections

Caution

- This system is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is powered when the ignition switch is in the accessory position.
- **Run all ground wires to a common ground point.**
- **Press the RESET button on the hideaway unit after completing the connections.**

Conexiones

Precauciones

- Este sistema ha sido diseñado para alimentarse solamente con 12 V CC, negativo a masa.
- Antes de realizar las conexiones, desconecte el conductor de puesta a masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte los conductores de entrada de alimentación **amarillo** y **rojo** solamente después de haber conectado todos los demás.
- Cerciórese de conectar el conductor de entrada de alimentación rojo a un terminal de alimentación de 12 V positivo que se alimente al poner el interruptor de encendido en la posición para accesorios.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- **Después de haber finalizado las conexiones, presione el botón RESET de la unidad oculta.**

Anslutningar

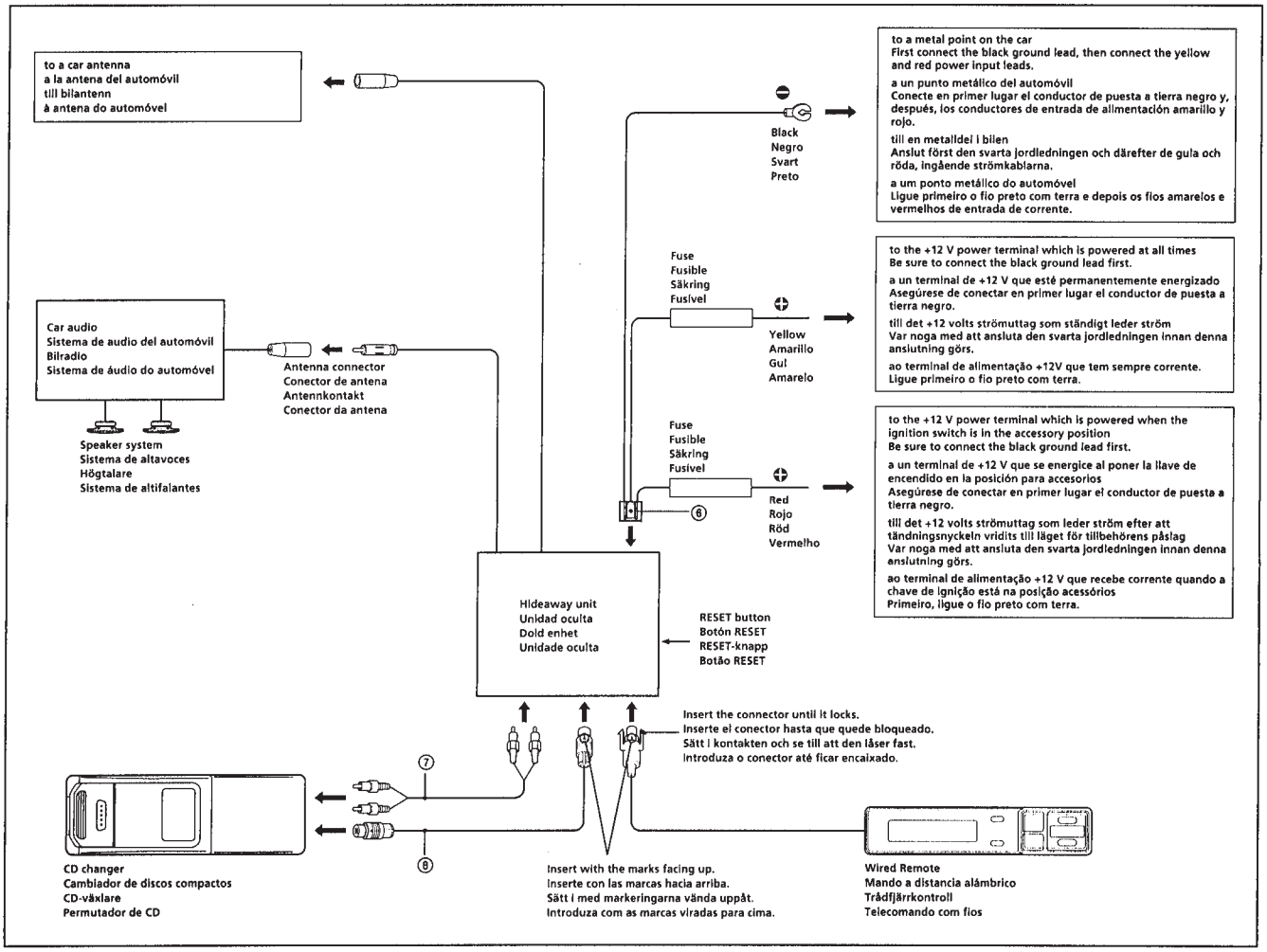
Varning

- Detta system är endast avsett för negativ jord vid 12 volts likström.
- Innan du ansluter apparaten, kopplar du ifrån bilbatteriets jordanslutning för att undvika kortslutning.
- Anslut de **gula** och **röda** strömkablarna efter att du har anslutet de övriga kablarna.
- Se till att du ansluter den röda kabeln till det positiva 12-voltsuttaget som får ström när tändningsomkopplaren är i tändningsläge.
- **Koppla alla jordkablar till en gemensam punkt.**
- **Tryck på RESET-knappen på Den dolda enheten när du är klar med anslutningarna.**

Ligações

Atenção

- Este sistema foi concebido para funcionar apenas com uma corrente de 12 V CC com negativo à massa.
- Antes de efectuar as ligações, desligue o terminal de terra da bateria do automóvel para evitar curto-circuitos.
- Ligue os fios **amarelo** e **vermelho** de entrada de corrente unicamente depois de ter efectuado todas as outras ligações.
- Ligue o fio de entrada de corrente vermelho ao terminal positivo de 12 volts que tem corrente quando a chave de ignição estiver na posição acessórios.
- **Ligue todos os fios de terra a um ponto de massa comum.**
- **Ligue todos os fios de terra a um ponto de massa comum. Carregue no botão de RESET do modulador oculto depois de ter efectuado todas as ligações.**


to a car antenna
a la antena del automóvil
till bilantenn
à antena do automóvel
Car audio
Sistema de audio del automóvil
Bilradio
Sistema de áudio do automóvel
Antenna connector
Conector de antena
Antennkontakt
Conector da antena
Speaker system
Sistema de altavoces
Högtalare
Sistema de altifalantes
Black
Negro
Svart
Preto
to a metal point on the car
First connect the black ground lead, then connect the yellow and red power input leads.
a un punto metálico del automóvil
Conecte en primer lugar el conductor de puesta a tierra negro y, después, los conductores de entrada de alimentación amarillo y rojo.
till en metalldel i bilen
Anslut först den svarta jordledningen och därefter de gula och röda, ingående strömkablarna.
a um ponto metálico do automóvel
Ligue primeiro o fio preto com terra e depois os fios amarelos e vermelhos de entrada de corrente.
Fuse
Fusible
Säkring
Fusível
Yellow
Amarillo
Gul
Amarelo
to the +12 V power terminal which is powered at all times
Be sure to connect the black ground lead first.
a un terminal de +12 V que esté permanentemente energizado
Asegúrese de conectar en primer lugar el conductor de puesta a tierra negro.
till det +12 volts strömuttag som ständigt leder ström
Var noga med att ansluta den svarta jordledningen innan denna anslutning görs.
ao terminal de alimentação +12V que tem sempre corrente.
Ligue primeiro o fio preto com terra.
Fuse
Fusible
Säkring
Fusível
Red
Rojo
Röd
Vermelho
to the +12 V power terminal which is powered when the ignition switch is in the accessory position
Be sure to connect the black ground lead first.
a un terminal de +12 V que se energice al poner la llave de encendido en la posición para accesorios
Asegúrese de conectar en primer lugar el conductor de puesta a tierra negro.
till det +12 volts strömuttag som leder ström efter att tändningsnyckeln vridits till läget för tillbehörens påslag
Var noga med att ansluta den svarta jordledningen innan denna anslutning görs.
ao terminal de alimentação +12 V que recebe corrente quando a chave de ignição está na posição acessórios
Primeiro, ligue o fio preto com terra.
Hideaway unit
Unidad oculta
Dold enhet
Unidade oculta
RESET button
Botón RESET
RESET-knapp
Botão RESET
Insert the connector until it locks.
Inserte el conector hasta que quede bloqueado.
Sätt i kontakten och se till att den låser fast.
Introduza o conector até ficar encaixado.
CD changer
Cambiador de discos compactos
CD-växlare
Permutador de CD
Insert with the marks facing up.
Inserte con las marcas hacia arriba.
Sätt i med markeringarna vända uppåt.
Introduza com as marcas viradas para cima.
Wired Remote
Mando a distancia alámbrico
Trådfjärrkontroll
Telecomando com fios

Note

Even though this system is connected with BUS cables, it doesn't include the custom file function. If you connect this CD changer to a Sony main unit which includes the custom file function, this function will not work.

Nota

Este sistema se conecta con cables BUS. Sin embargo, no incluye la función de archivo personalizado. Aunque conecte el cambiador de discos compactos a una unidad principal Sony que incluya la función de archivo personalizado, tal función no se activará.

Observera

Detta system har inte någon egen minnesfunktion trots att det är anslutet med BUS-kablar. Om CD-växlaren ansluts till en Sony-apparat med minnesfunktion kan du inte använda denna funktion.

Nota

Apesar deste sistema estar ligado com cabos BUS, não está no entanto equipado com a função de ficheiro personalizado. Mesmo que ligue o permutador de CD a um aparelho Sony equipado com a função de ficheiro personalizado, esta função não funciona.

Fuse replacement

If the fuse blows, check the power connection and replace the fuse. If the fuse blows again after replacement, there may be an internal malfunction.

Warning

Use a fuse with the specified amperage rating. Use of a higher amperage fuse may cause serious damage.

Sustitución del fusible

Si el fusible se funde, verifique la conexión de alimentación y sustitúyalo. Si una vez sustituido vuelve a fundirse, puede deberse a un funcionamiento interno defectuoso.

Precaución

Emplee un fusible del amperaje especificado. El uso de un fusible de amperaje superior puede provocar daños graves.

Byta säkring

Om säkringen smälter, kontrollerar du anslutningen och byter ut säkringen. Om säkringen smälter igen efter det att den bytts en gång kan det bero på ett internt fel.

Varning

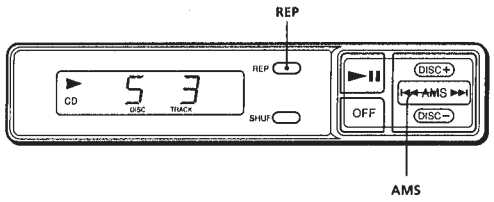
Välj en säkring för rätt strömstyrka. Om du använder en säkring för en högre strömstyrka kan allvarliga skador uppstå.

Substituição dos fusíveis

Se o fusível rebentar, verifique as ligações e substitua o fusível. Se o fusível voltar a rebentar depois de o substituir, pode tratar-se de uma avaria interna.

Aviso

Utilize um fusível com a amperagem especificada. A utilização de um fusível com uma amperagem superior pode provocar danos graves.



Note
The supplied wireless remote (RM-X58) can be operated just like the wired remote (RM-X57).

Nota
El mando a distancia inalámbrico suministrado (RM-X58) puede emplearse de la misma forma que el mando a distancia alámbrico (RM-X57).

Observera
Den medföljande trådlösa fjärrkontrollen (RM-X58) kan användas precis som trådfjärrkontrollen (RM-X57).

Nota
O telecomando sem fios fornecido (RM-X58) pode ser utilizado da mesma forma que o telecomando com fios (RM-X57).

Changing the transmitting frequency

Because this unit processes CD playback sound through an FM tuner, there may be interference noise during CD playback. In this case change the frequency of the modulated RF signal transmitted from hideaway unit. The initial setting is 88.3 MHz.

1. **Press (REP) for two seconds until frequency appears.**
2. **Press either the left or right side of (AMS) to select the frequency.**
   Each time you press (AMS), the frequency changes as follows:
   I◄◄ : 88.3 MHz → 89.9 MHz → 89.7 MHz → 89.5 MHz → 89.3 MHz → 89.1 MHz → 88.9 MHz → 88.7 MHz → 88.5 MHz → 88.3 MHz
   ►►I : 88.3 MHz → 88.5 MHz → 88.7 MHz → 88.9 MHz → 89.1 MHz → 89.3 MHz → 89.5 MHz → 89.7 MHz → 89.9 MHz → 88.3 MHz
3. **Press (REP) for two seconds.**

Note
Be sure to set the frequency of your FM tuner to the newly selected frequency.

Cambio de la frecuencia de transmisión

Dado que esta unidad procesa el sonido reproducido de discos compactos mediante un sintonizador de FM, es posible que se produzca ruido de interferencia durante la reproducción de los discos. En este caso, cambie la frecuencia de la señal RF modulada transmitida por la unidad oculta. El ajuste inicial es de 88,3 MHz.

1. **Pulse (REP) durante dos segundos hasta que aparezca la frecuencia.**
2. **Presione el lado izquierdo o el derecho de (AMS) para seleccionar la frecuencia.**
   Cada vez que presione (AMS), la frecuencias cambiarán de la forma siguiente:
   I◄◄: 88,3 MHz → 89,9 MHz → 89,7 MHz → 89,5 MHz → 89,3 MHz → 89,1 MHz → 88,9 MHz → 88,7 MHz → 88,5 MHz → 88,3 MHz
   ►►I: 88,3 MHz → 88,5 MHz → 88,7 MHz → 88,9 MHz → 89,1 MHz → 89,3 MHz → 89,5 MHz → 89,7 MHz → 89,9 MHz → 88,3 MHz
3. **Presione (REP) durante dos segundos.**

Nota
Cerciórese de ajustar la frecuencia de su sintonizador de FM a la nuevamente seleccionada.

Ändra sändningsfrekvensen

Eftersom enheten behandlar CD-uppspelningsljudet genom en FM-kanalväljare kan störningar uppstå under uppspelningen. Om så är fallet kan du ändra frekvens för den modulerade RF-signal som överförs från den dolda enheten. Ursprungsinställningen är 88,3 MHz.

1. **Tryck på (REP) i två sekunder tills frekvensen visas.**
2. **Tryck på vänster eller höger sidan på (AMS) för att välja frekvens.**
   Varje gång du trycker på (AMS) ändras frekvenserna enligt följande.
   I◄◄: 88,3 MHz → 89,9 MHz → 89,7 MHz → 89,5 MHz → 89,3 MHz → 89,1 MHz → 88,9 MHz → 88,7 MHz → 88,5 MHz → 88,3 MHz
   ►►I: 88,3 MHz → 88,5 MHz → 88,7 MHz → 88,9 MHz → 89,1 MHz → 89,3 MHz → 89,5 MHz → 89,7 MHz → 89,9 MHz → 88,3 MHz
3. **Tryck på (REP) under två sekunder.**

Observera
Ställ även in FM-kanalen på samma frekvens.

Alterar a frequência de transmissão

Como esta unidade processa o som de reprodução do CD através de um sintonizador FM, pode haver interferências durante a reprodução do CD. Neste caso, altere a frequência do sinal RF modulado transmitido a partir da unidade oculta. A regulação inicial é de 88,3 MHz.

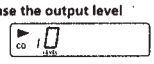
1. **Carregue em (REP) durante dois segundos até aparecer a frequência.**
2. **Carregue no lado esquerdo ou direito de (AMS) para seleccionar a frequência.**
   Sempre que carregar em (AMS), as frequências mudam da seguinte forma:
   I◄◄: 88,3 MHz → 89,9 MHz → 89,7 MHz → 89,5 MHz → 89,3 MHz → 89,1 MHz → 88,9 MHz → 88,7 MHz → 88,5 MHz → 88,3 MHz
   ►►I: 88,3 MHz → 88,5 MHz → 88,7 MHz → 88,9 MHz → 89,1 MHz → 89,3 MHz → 89,5 MHz → 89,7 MHz → 89,9 MHz → 88,3 MHz
3. **Carregue em (REP) durante 2 segundos.**

Nota
Não se esqueça de sintonizar a frequência do sintonizador FM para a frequência que acabou de seleccionar.

Changing the output level

You can select the output level from the CD changer. Normally the system is used in the initial output level; change the level if necessary.

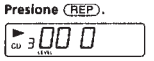
1. **Press (REP) for two seconds.**
2. **Press (REP).**

   Initial setting
3. **Press either the left or right side of (AMS) to select the output level.**
   To decrease the output level
   I◄◄ →
   
   To increase the output level
   ►►I →

4. **Press (REP) for two seconds.**

Cambio del nivel de salida

Usted podrá seleccionar el nivel de salida del cambiador de discos compactos. Normalmente el sistema se utilizarse el nivel de salida inicial, pero cámbielo cuando sea necesario.

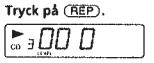
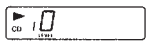
1. **Presione (REP) durante dos segundos.**
2. **Presione (REP).**
   
   Ajuste inicial
3. **Presione el lado izquierdo o el derecho de (AMS) para seleccionar el nivel de salida.**
   Para reducir el nivel de salida
   I◄◄ →

   Para aumentar el nivel de salida
   ►►I →

4. **Presione (REP) durante dos segundos.**

Ändra utnivån

Du kan ändra utnivå på CD-växlaren. Normalt använder systemet en förinställd utnivå som du dock kan ändra.

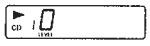
1. **Tryck på (REP) under två sekunder.**
2. **Tryck på (REP).**
   
   Förinställt värde
3. **Tryck på vänster eller höger sida på (AMS) för att välja utnivå.**
   Minska utnivån
   I◄◄ →
   
   Öka utnivån
   ►►I →

4. **Tryck på (REP) under två sekunder.**

Alterar o nível de saída

Pode seleccionar o nível de saída a partir do permutador de CD. Em situações normais, o sistema é utilizado com o nível de saída original, no entanto este pode ser alterado sempre que necessário.

1. **Carregue em (REP) durante 2 segundos.**
2. **Carregue em (REP).**

   Definição de origem
3. **Carregue no lado esquerdo ou no lado direito de (AMS) para seleccionar o nível de saída.**
   Para diminuir o nível de saída
   I◄◄ →
   
   Para aumentar o nível de saída
   ►►I →

4. **Carregue em (REP) durante 2 segundos.**

Installing the system in a car without an accessory switch position

POWER SELECT switch setting

When the unit is used in a car without an accessory position on the ignition switch, set the POWER SELECT switch on the side of the hideaway unit to OFF.
This causes the display to go out when you turn the ignition OFF. After changing the POWER SELECT switch position, be sure to press the RESET button on the hideaway unit with a ballpoint pen etc.

Instalación del sistema en un automóvil sin posición para accesorios

Ajuste del interruptor POWER SELECT

Cuando la unidad se emplee en un automóvil que no disponga de una posición para accesorios en el interruptor de encendido, ajuste el interruptor POWER SELECT, situado en el lateral de la unidad oculta, en OFF.
Esto produce la desactivación del visor al girar la llave de encendido hasta la posición OFF. Una vez realizado el cambio de posición del interruptor POWER SELECT, asegúrese de presionar el botón RESET en la unidad oculta con un bolígrafo, etc.

Installera systemet i en bil utan tändläge för tillbehör

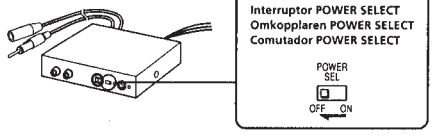
Inställning av omkopplaren POWER SELECT

När enheten används i en bil utan ett nyckelläge som ger ström åt tillbehör utan att bilens tändsystem slås på, ställer du in omkopplaren POWER SELECT i OFF-läge vid sidan av enheten. Detta resulterar i att teckenfönstret släcks när du Slår av tändningen på bilen. När du har ändrat läget för omkopplaren POWER SELECT, se då till att trycka på RESET-knappen på enheten med en kulspetspenna.

Instalação do sistema num automóvel sem a posição acessórios

Regulação do comutador POWER SELECT

Se utilizar o aparelho num automóvel que não tenha uma posição acessórios na chave de ignição, regule o comutador POWER SELECT situado ao na parte lateral da unidade oculta para a posição OFF. Assim o visor apaga-se quando rodar a chave de ignição para a posição OFF. Depois de mudar a posição do comutador POWER SELECT, não se esqueça de carregar em RESET unidade oculta com o bico de uma caneta ou com qualquer outro objecto pontiagudo.



Reset button

After the installation and connections are complete, after the batteries have been changed, or when the POWER SELECT switch has been changed, make sure to press the RESET button with a ballpoint pen, etc.

Återställningsknapp

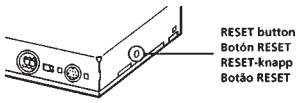
När installationerna och anslutningarna är gjorda, när batterierna har bytts ut eller när du har ändrat läge på POWER SELECT-omkopplaren, ska du se till att trycka på RESET-knapp med en kulspetspenna.

Botón de reposición

Una vez realizadas la instalación y las conexiones no olvide presionar el botón RESET con un bolígrafo, etc., después de cambiar las pilas o la posición del interruptor POWER SELECT.

Botão de reinicialização

Depois de terminar a instalação e as ligações, de ter substituído as pilhas ou quando mudar o comutador POWER SELECT, não se esqueça de carregar em RESET com o bico de uma caneta, etc.



RESET button
Botón RESET
RESET-knapp
Botão RESET

Wired remote

- Avoid mounting it where it may:
  — hinder normal driving activities.
  — jeopardize the passengers.
  — be subjected to hot air from the heater.
  — be subjected to direct sunlight.
- After installing the system, make sure the whole system can be operated by the wired remote.

Fjärrkontrollen

- Montera den inte där den kan:
  — hindra föraren från normal körning
  — är i vägen för passagerarna
  — sitter för nära varmluftsutsläppen
  — utsätts för direkt solljus
- När du har installerat systemet ser du till att du kan styra det med den trådanslutna fjärrkontrollen.

Mando a distancia alámbrico

- Evite montarlo donde pueda:
  — estorbar las operaciones normales de conducción.
  — molestar a los pasajeros.
  — quedar sometido al aire caliente procedente del aparato de calefacción.
  — quedar sometido a la luz solar directa.
- Después de haber instalado el sistema, compruebe que puede emplear todo el sistema mediante el mando a distancia alámbrico.

Telecomando

- Evite montá-lo nos locais onde:
  — possa interferir com as condições normais de condução
  — possa pôr em perigo os passageiros
  — fique exposto ao ar quente proveniente do aquecedor
  — fique directamente exposto aos raios solares
- Após a instalação do sistema, certifique-se de que pode controlá-lo com o telecomando com fios.

Installing the wired remote

Use the supplied double-sided adhesive tape ④, and mount the wired remote in a suitable location where it will not interfere with your driving.

Installera den trådanslutna fjärrkontrollen

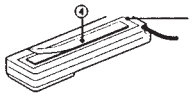
Använd den dubbelhäftande tejpen ④ som medföljer och montera den trådanslutna fjärrkontrollen så att den inte sitter i vägen när du kör.

Instalación del mando a distancia alámbrico

Utilice la cinta ④ adhesiva de doble cara suministrada e instale el mando a distancia alámbrico en un lugar adecuado que no interfiera en la conducción.

Instalação do telecomando com fios

Utilize a fita adesiva de duas faces fornecida ④ e monte o telecomando com fios num local onde não interfira com a condução.



The back of the wired remote
Parte posterior del mando a distancia alámbrico
Baksidan på den trådanslutna fjärrkontrollen
Parte posterior do telecomando com fios

Install the wireless remote

Use the supplied velcro tapes ⑤, and mount the wireless remote in a suitable location where it will not interfere with your driving.

Inatallera den trådlösa fjärrkontrollen

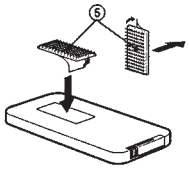
Använd de medföljande kardborrbanden ⑤ och fäst den trådlösa fjärrkontrollen så att den inte är i vägen för dig när du kör.

Instalación del mando a distancia inalámbrico

Utilice las cintas velcro suministradas ⑤ para montar el mando a distancia inalámbrico en un lugar que no dificulte la conducción.

Instalação do telecomando sem fios

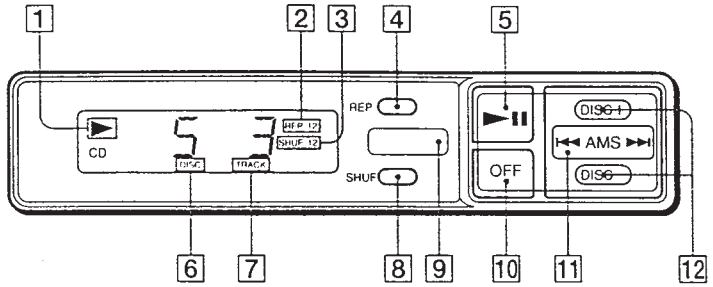
Utilize as fitas de velcro fornecidas ⑤ e monte o telecomando sem fios num local onde não interfira com a condução.



to the mounting surface
a la superficie de montaje
där fjärrkontrollen ska monteras
ao suporte de montagem

Location of controls

Wired remote (RM-X57)



Refer to the pages for details.

1 ► (play/pause) indication
Lights during CD playback and flashes when the pause button is pressed.

2 REP (repeat play) indication

3 SHUF (shuffle play) indication

4 REP (repeat play/control mode set) button 6, 7

5 ►II (play/pause) button 6
If pressed during playback, the CD will pause. If pressed again, playback will continue.

6 DISC (disc number) indication

7 TRACK (track number) indication

8 SHUF (shuffle play) button 7

9 Infrared receptor for the wireless remote

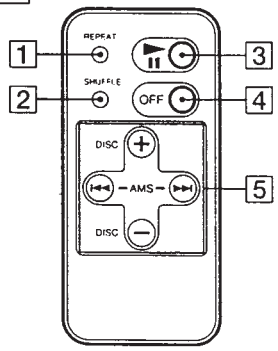
10 OFF button 6, 7

11 AMS (Automatic Music Sensor/manual search) button 6, 7

12 DISC (disc select)button 6, 7

Location of controls

Wireless remote (RM-X58)



1 REPEAT (repeat play) button

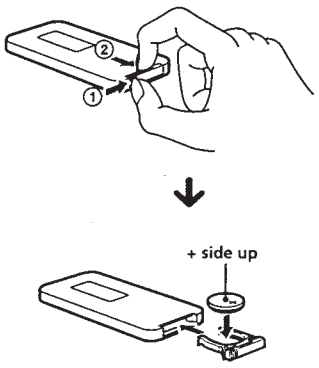
2 SHUFFLE (shuffle play) button

3 ►II (play/pause) button

4 OFF button

5 AMS/DISC (Automatic Music Sensor/ disc select) button
You cannot do the manual search with the wireless remote.

Installing the battery



Replace the battery with a Sony CR2025 or Duracell DL-2025 lithium battery. Use of another battery may present a risk of fire or explosion.

When the battery becomes weak, you will not be able to operate the unit with the wireless remote.
Battery life is about six months depending on the conditions of use.

WARNING
The battery may explode if mistreated.
Do not recharge, disassemble or dispose of in fire.

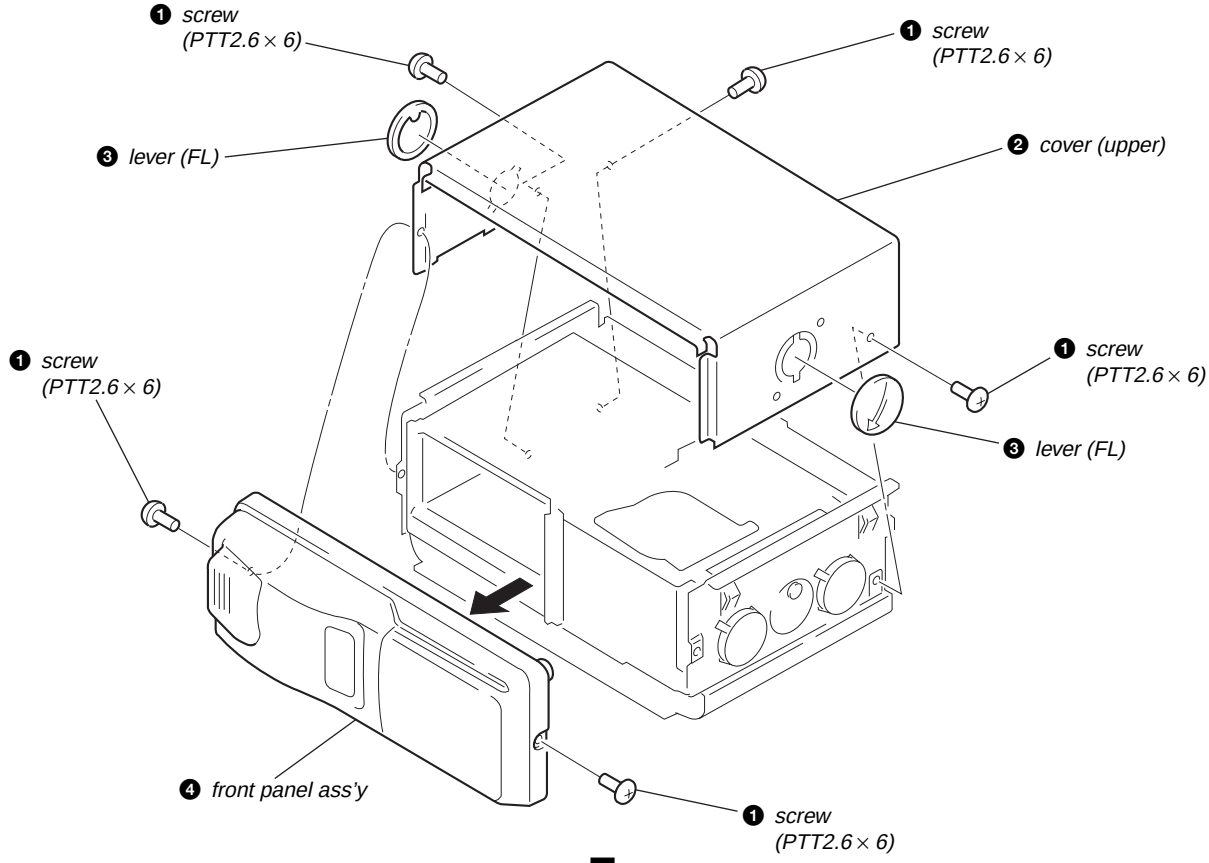
Notes on the lithium battery

- Keep the lithium battery out of the reach of children.
  Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short circuit may occur.

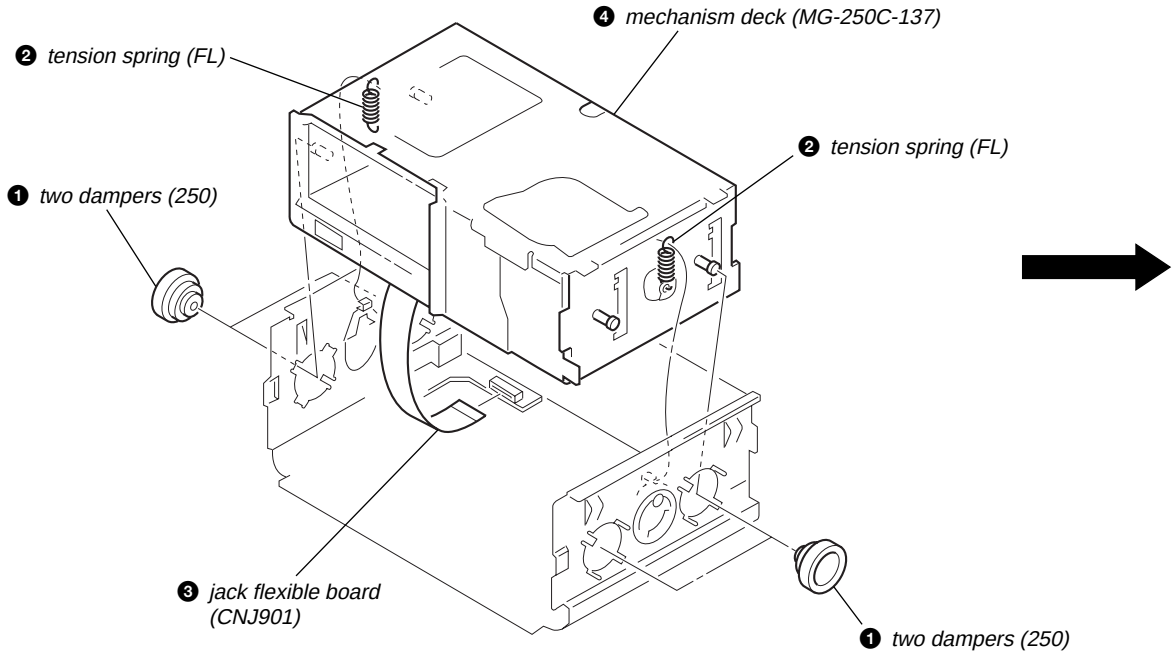
SECTION 3
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

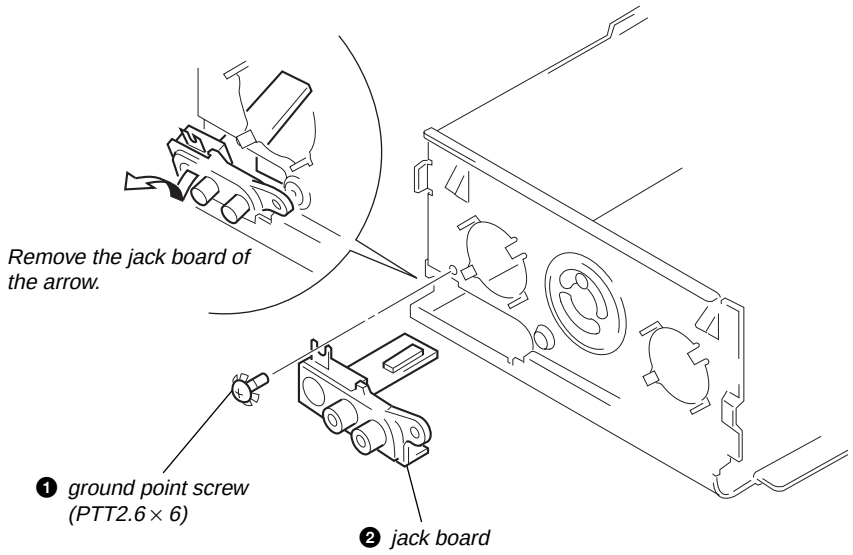
COVER (UPPER) , FRONT PANEL ASS'Y


❶ screw (PTT2.6 × 6)
❶ screw (PTT2.6 × 6)
❸ lever (FL)
❷ cover (upper)
❶ screw (PTT2.6 × 6)
❶ screw (PTT2.6 × 6)
❸ lever (FL)
❹ front panel ass'y
❶ screw (PTT2.6 × 6)

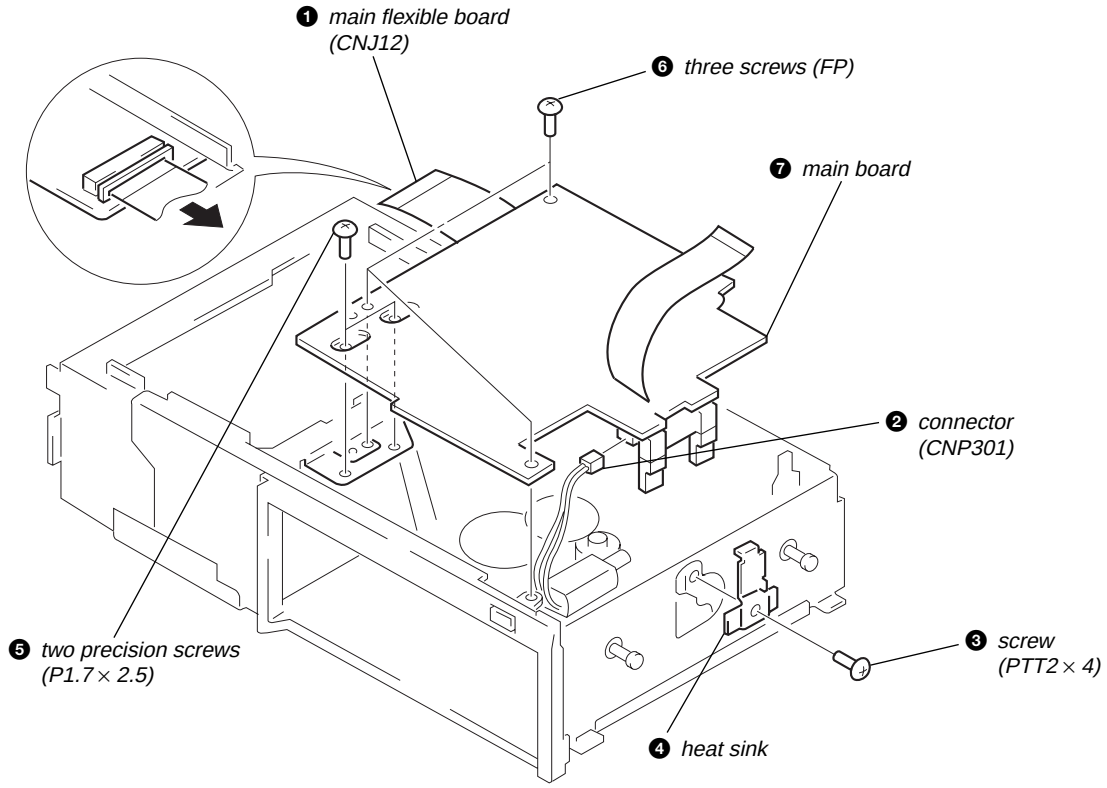
MECHANISM DECK (MG-250C-137)


❹ mechanism deck (MG-250C-137)
❷ tension spring (FL)
❷ tension spring (FL)
❶ two dampers (250)
❸ jack flexible board (CNJ901)
❶ two dampers (250)

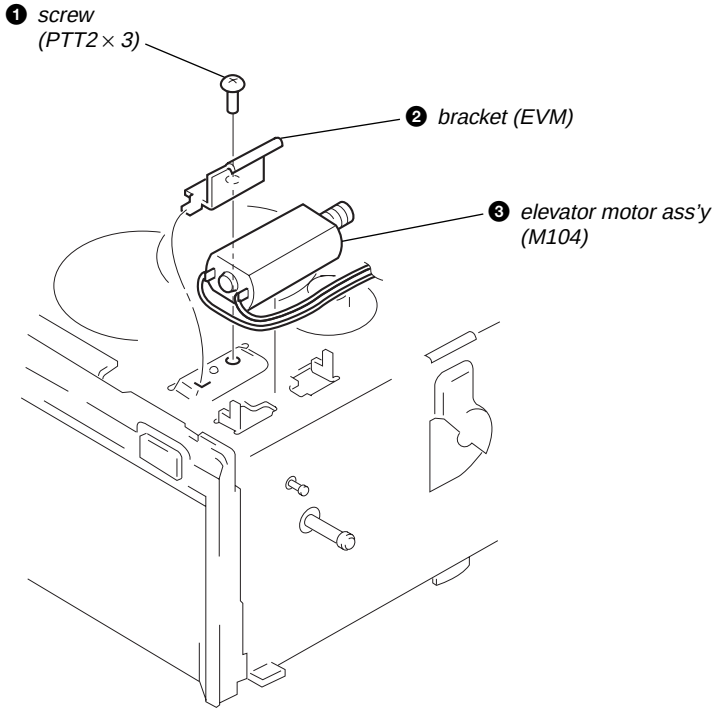
JACK BOARD



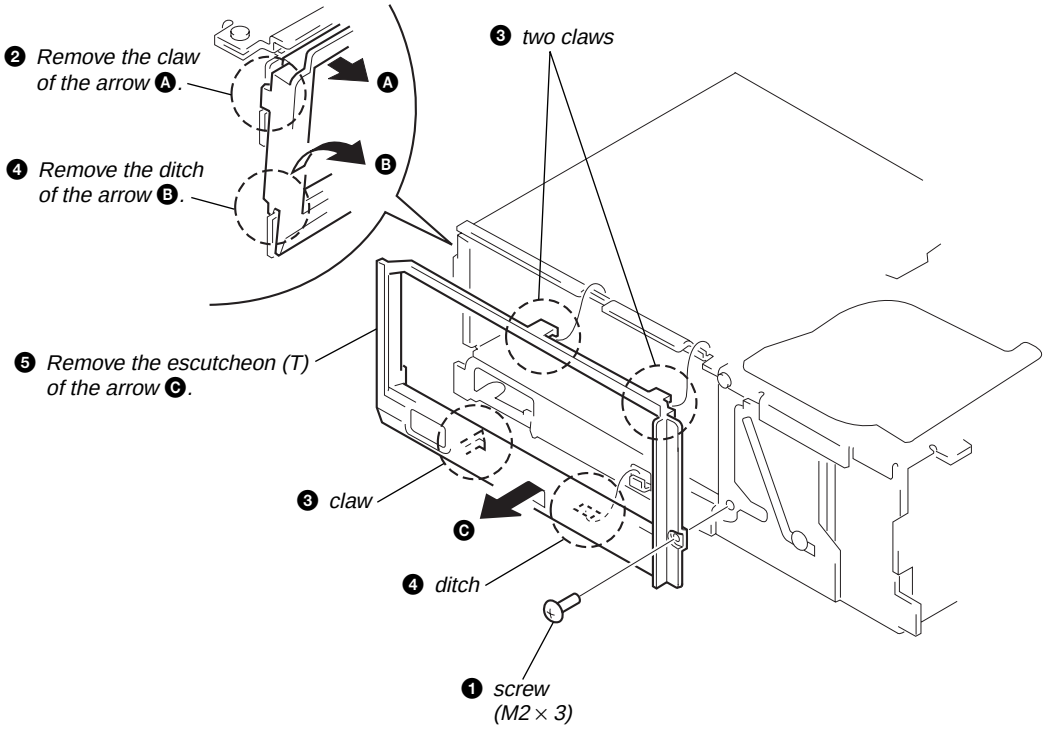
MAIN BOARD


❶ main flexible board (CNJ12)
❻ three screws (FP)
❼ main board
❷ connector (CNP301)
❸ screw (PTT2 × 4)
❹ heat sink
❺ two precision screws (P1.7 × 2.5)

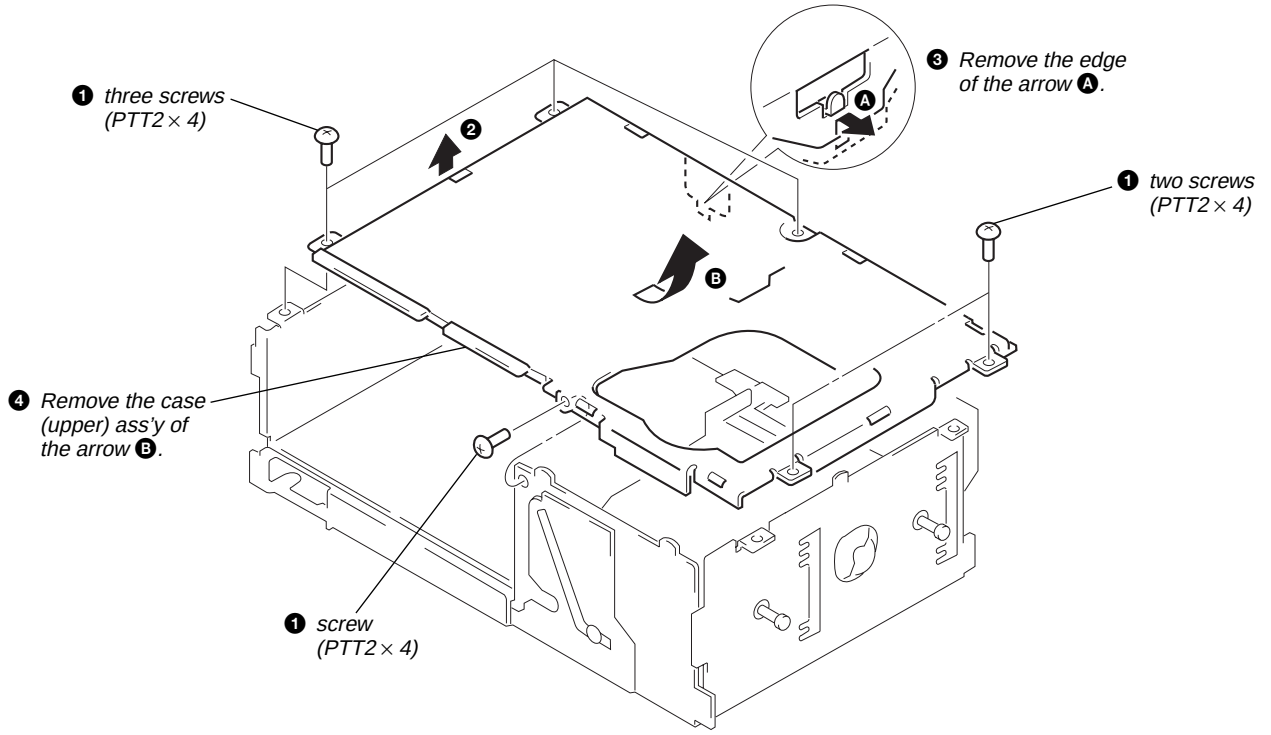
ELEVATOR MOTOR ASS'Y (M104)



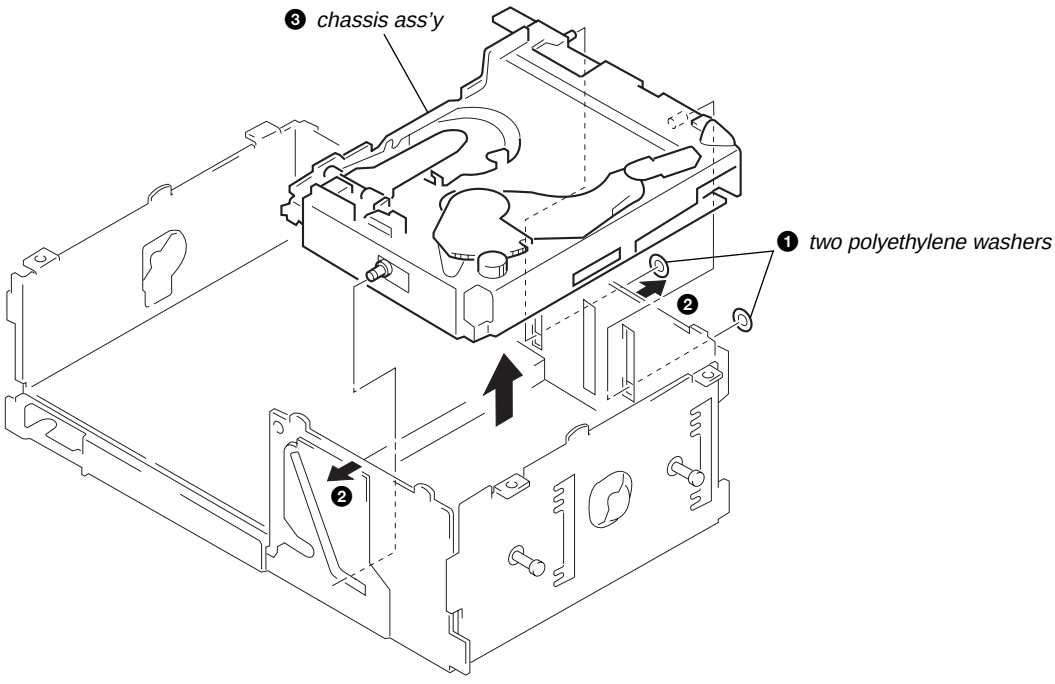
ESCUTCHEON (T)



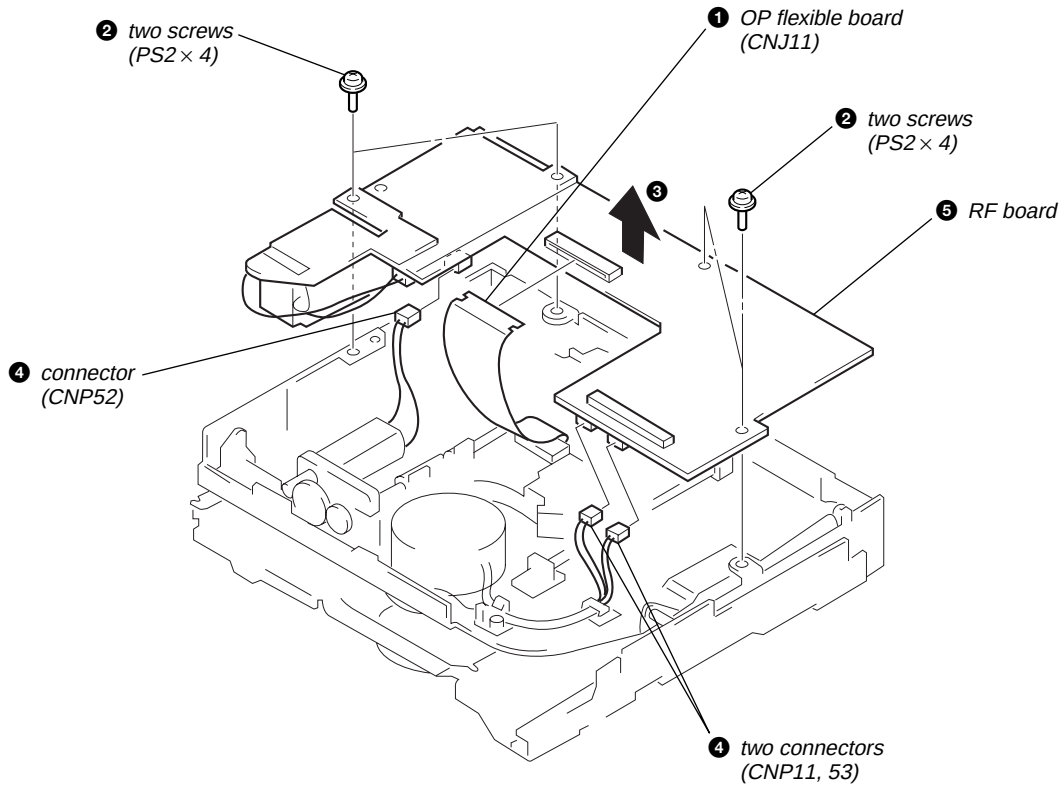
CASE (UPPER) ASS'Y


❶ three screws (PTT2 × 4)
❷
❸ Remove the edge of the arrow Ⓐ.
Ⓐ
❶ two screws (PTT2 × 4)
Ⓑ
❹ Remove the case (upper) ass'y of the arrow Ⓑ.
❶ screw (PTT2 × 4)

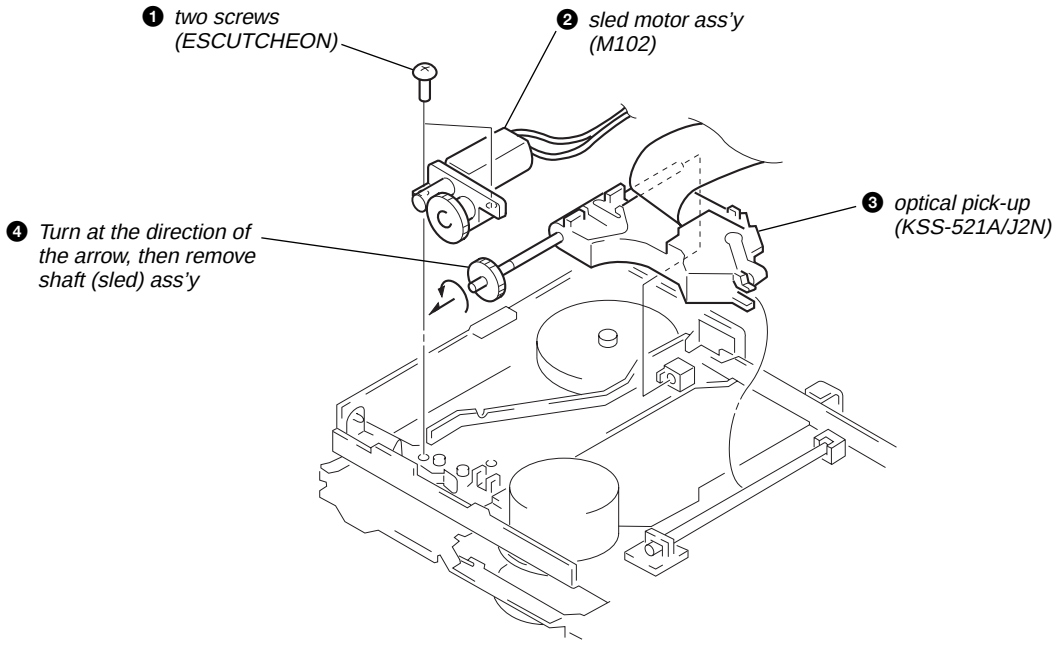
CHASSIS ASS'Y



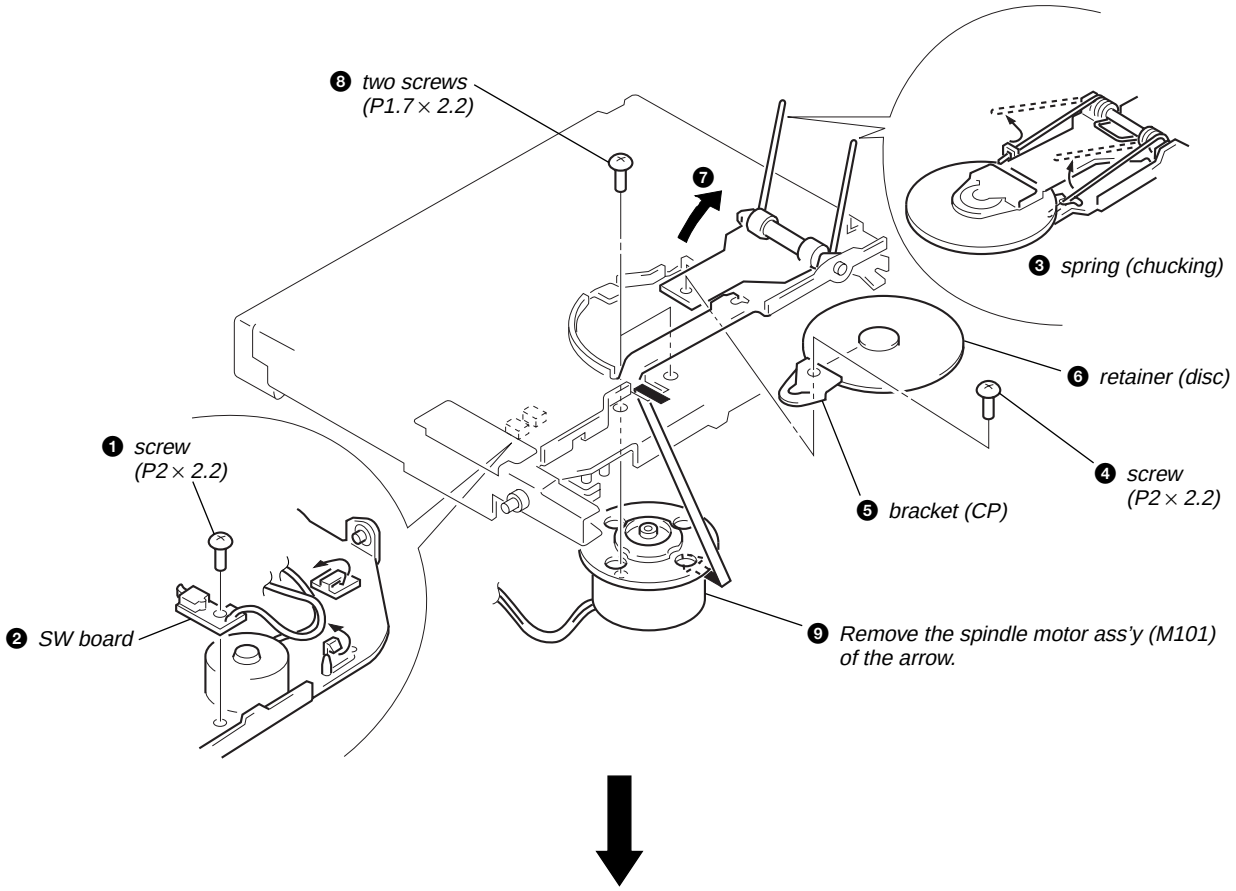
RF BOARD



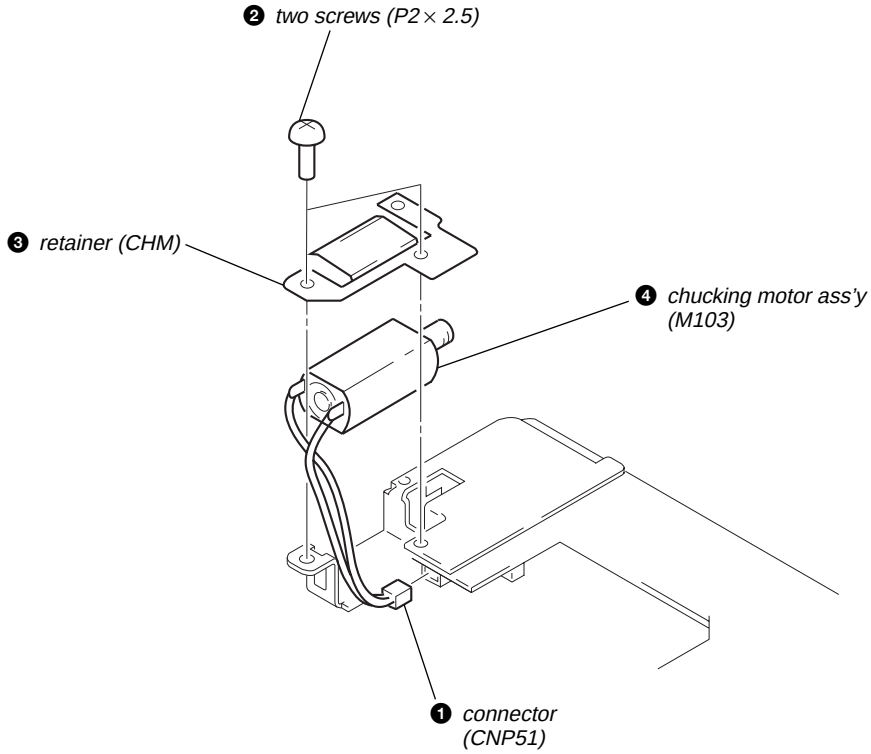
SLED MOTOR ASS'Y (M102) , OPTICAL PICK-UP (KSS-521A/J2N)


❶ two screws (ESCUTCHEON)
❷ sled motor ass'y (M102)
❸ optical pick-up (KSS-521A/J2N)
❹ Turn at the direction of the arrow, then remove shaft (sled) ass'y

SW BOARD, SPINDLE MOTOR ASS'Y (M101)


❽ two screws (P1.7 × 2.2)
❼
❸ spring (chucking)
❻ retainer (disc)
❶ screw (P2 × 2.2)
❹ screw (P2 × 2.2)
❺ bracket (CP)
❷ SW board
❾ Remove the spindle motor ass'y (M101) of the arrow.

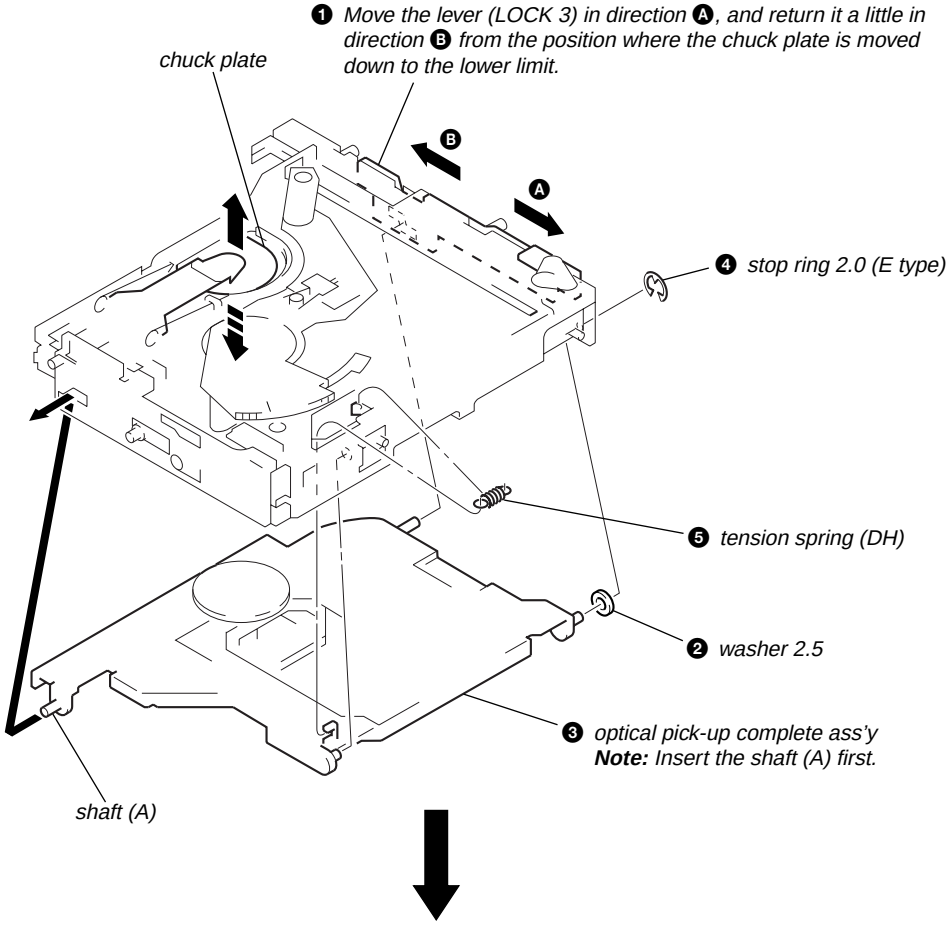
CHUCKING MOTOR ASS'Y (M103)



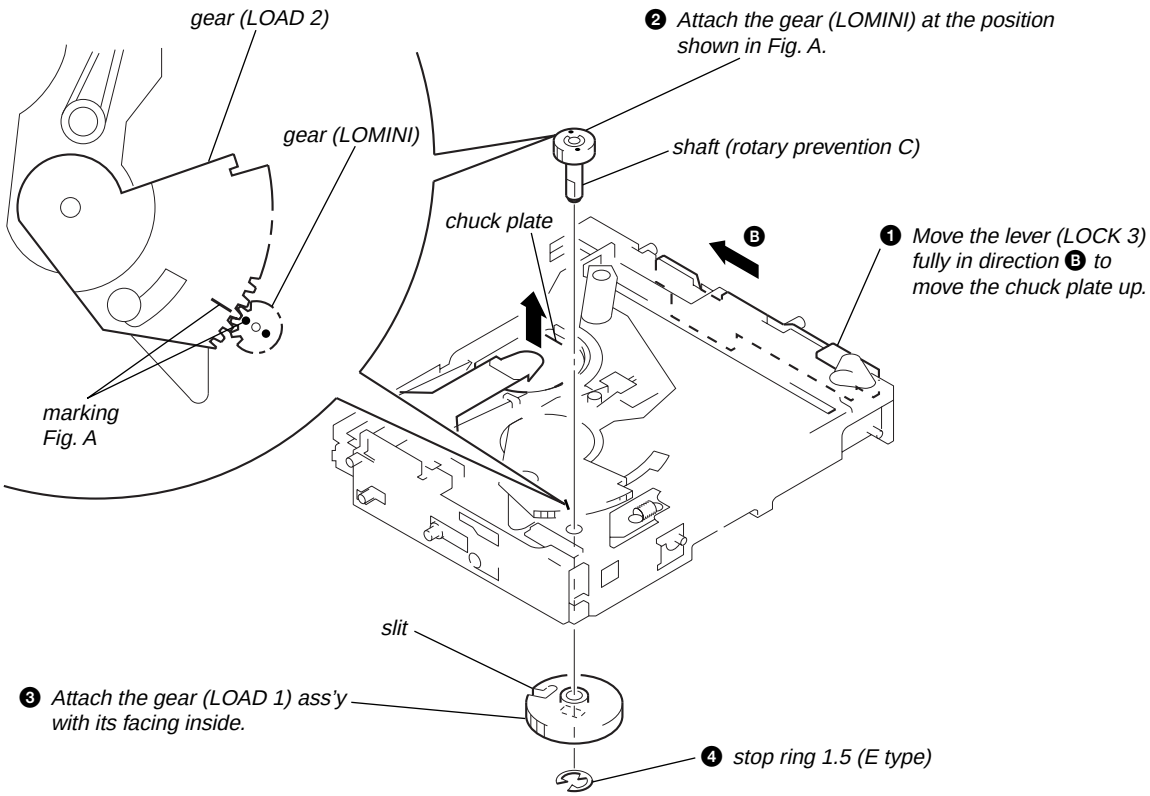
SECTION 4
MECHANISM DECK ASSEMBLY

Note: Follow the assembly procedure in the numerical order given.

OPTICAL PICK-UP COMPLETE ASS'Y

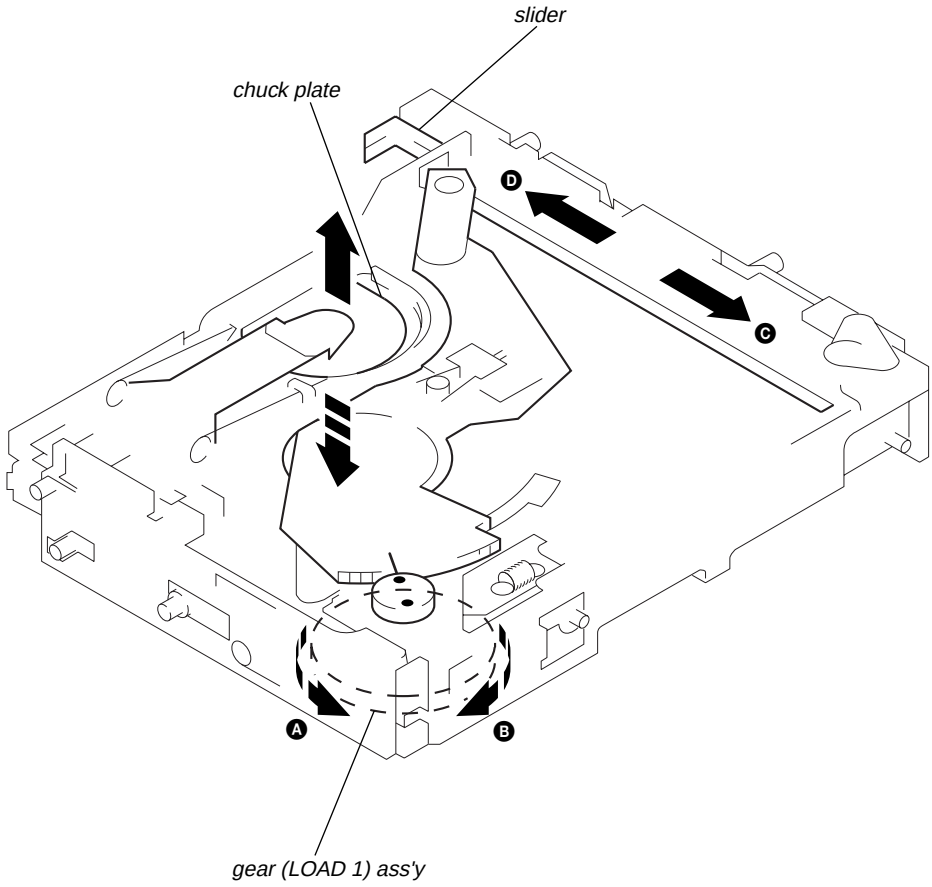

❶ Move the lever (LOCK 3) in direction Ⓐ, and return it a little in direction Ⓑ from the position where the chuck plate is moved down to the lower limit.
chuck plate
Ⓑ
Ⓐ
❹ stop ring 2.0 (E type)
❺ tension spring (DH)
❷ washer 2.5
❸ optical pick-up complete ass'y
Note: Insert the shaft (A) first.
shaft (A)

GEAR (LOMINI) / (LOAD 1) ASS'Y


gear (LOAD 2)
❷ Attach the gear (LOMINI) at the position shown in Fig. A.
gear (LOMINI)
shaft (rotary prevention C)
chuck plate
Ⓑ
❶ Move the lever (LOCK 3) fully in direction Ⓑ to move the chuck plate up.
marking
Fig. A
slit
❸ Attach the gear (LOAD 1) ass'y with its facing inside.
❹ stop ring 1.5 (E type)

OPERATION CHECK

❶ *Confirm that the slider moves in direction Ⓒ to move down the chuck plate if the gear (LOAD 1) is rotated in direction Ⓐ or the chuck plate moves up and the slider moves in direction Ⓓ if the gear is rotated in direction Ⓑ.*

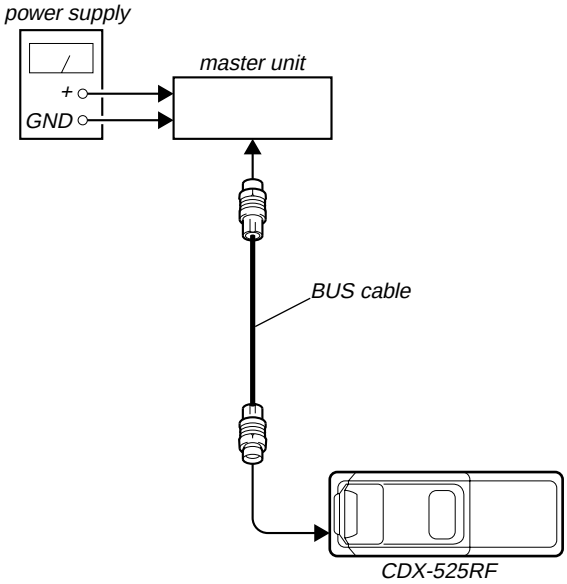


SECTION 5
MECHANICAL ADJUSTMENTS

• Elevator Height (Address) Adjustment

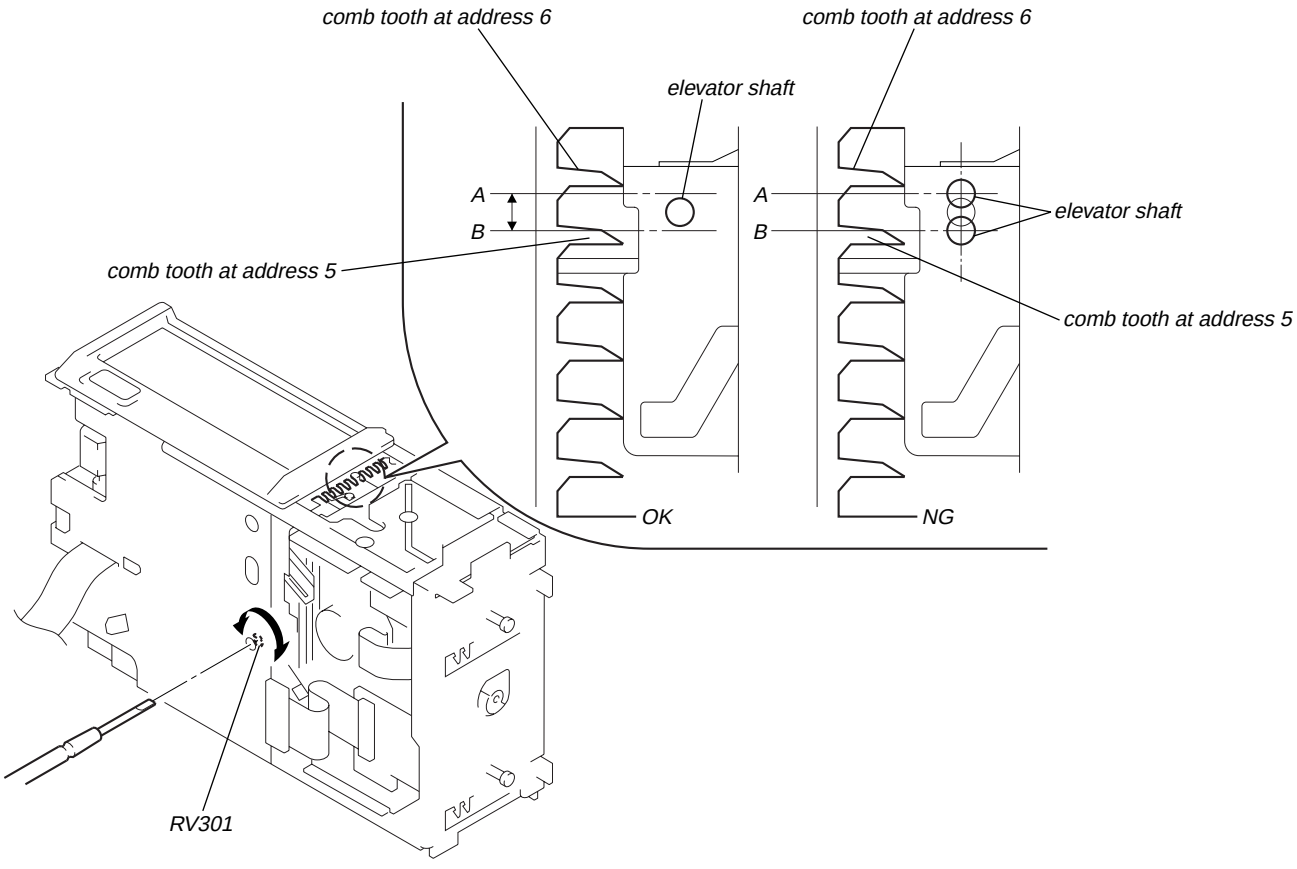
Note: This adjustments is necessary when the system controller (IC302), variable resistor (RV301), slider (R), slider (L), or chassis (ELV) was replaced for any repair.

Connection:



Adjustment Method:

1. Connect this set to the master unit (e.g. MDX-C670/C670RDS), load a disc magazine, and place the set vertically as shown below.
2. Connect the regulated power supply to the master unit, and turn the power on.
3. Press the DISC button on the master unit and select DISC 5.
4. At this time, if the elevator shaft does not position between comb teeth A and B at addresses 5 and 6 as shown below, adjust the following.
5. Press repeatedly the DISC + and – buttons on the master unit so that the elevator shafts moves from address 6 to address 5, or from 5 to 6. At this time, adjust RV301 on the main board so that the elevator shaft positions smoothly between comb teeth A and B.
6. Further, place the set horizontally and make same adjustment as mentioned above.
7. After adjustment at addresses 5 to 6 is finished, check all operations from addresses 1 to 10 with the set placed vertically and horizontally respectively to confirm that the elevator shaft positions in a range between comb teeth A to B.

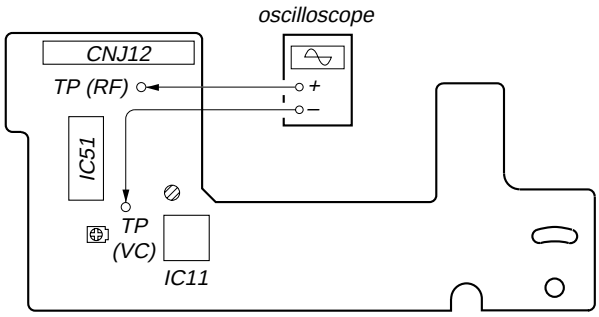


SECTION 6
ELECTRICAL ADJUSTMENTS

Note:
1. Perform adjustments as given.
2. Power supply voltage: DC14.4 V (more than 3A).

• FOCUS BIAS CHECK

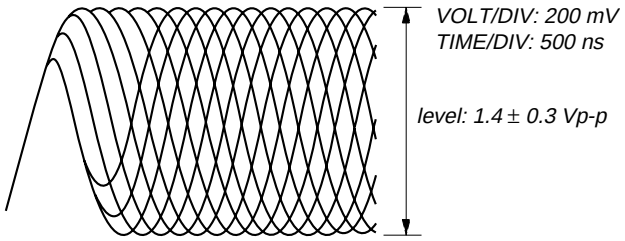
[RF BOARD] – Conductor Side –



Procedure:
1. Connect the oscilloscope to TP (RF) and TP (VC) on the RF board.
2. Put the set into play mode by loading the disc.
3. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

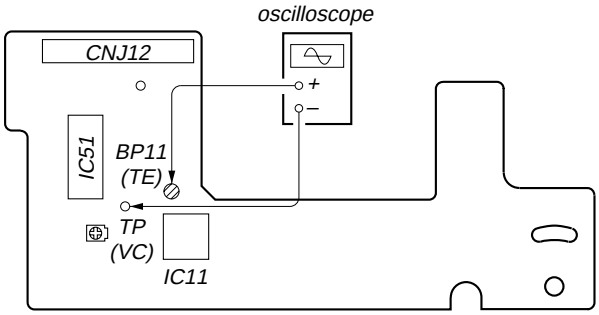
Note:
Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

RF signal waveform



• TRACKING OFFSET CHECK

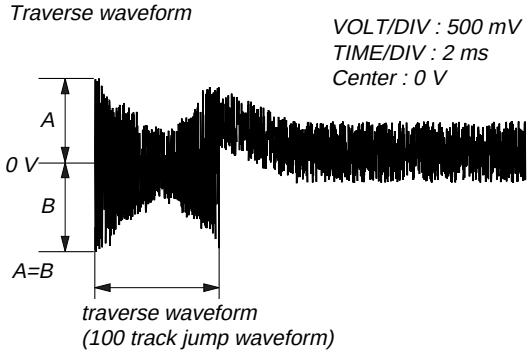
[RF BOARD] – Conductor Side –



Procedure:
1. Connect the oscilloscope to BP11 (TE) and TP (VC) on the RF board.
2. Put the set into play mode by loading the disc.
3. Press the ⏮ AMS ⏭ button, and check the traverse waveform*.
4. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V dc, and check this level.

* Traverse waveform: This is the tracking error wave form appears when crossing the track.

Traverse waveform

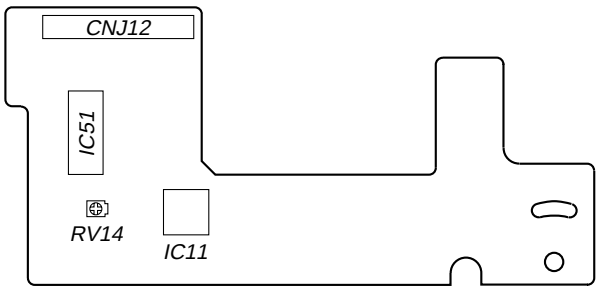


• **FOCUS GAIN ADJUSTMENT (COARSE ADJUSTMENT)**

This adjustment is to be performed when replacing the following parts.

- Optical Pick-up Block
- RV14

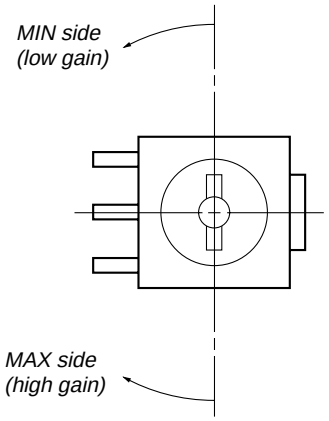
[RF BOARD] – Conductor Side –



Procedure:

1. Set RV14 (RF board) to the standard position.
2. Check that there is not an abnormal amount of operation noise (white noise) from the 2-axis devise. If there is, turn RV14 slightly clockwise.

[RF BOARD] – Conductor Side –



RV14 standard position

- **When gain is lowered...**
  The set does not play because of no focus operation.
- **When gain is highered...**
  Operation noise is heard due to a scratch or a dust, then operation will be unstable.

SECTION 7
DIAGRAMS

7-1. NOTES FOR PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

Note on Printed Wiring Board:

- ○——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ● : Through hole.
- △ : internal component.
- ▒▒▒ : Pattern from the side which enables seeing.

(The other layers' patterns are not indicated.)

Caution:	
Pattern face side: (Conductor Side)	Parts on the pattern face side seen from the pattern face are indicated.
Parts face side: (Component Side)	Parts on the parts face side seen from the parts face are indicated.

Note on Schematic Diagram:

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

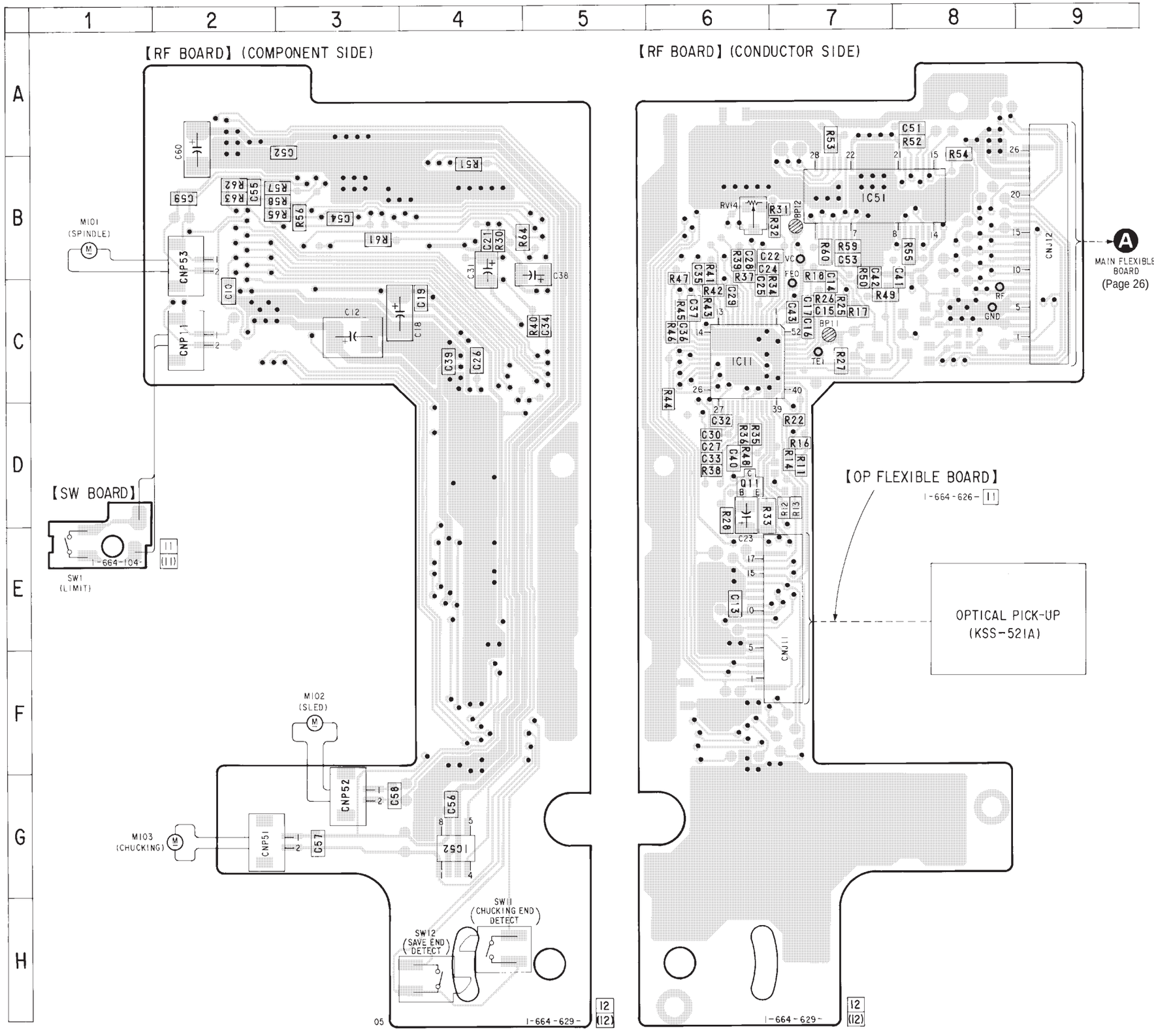
Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

- B+ : B+ Line.
- ▬ : adjustment for repair.
- Power voltage is dc 14.4V and fed from CD changer controller.
- Voltages and waveforms are dc with respect to ground in playback mode.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

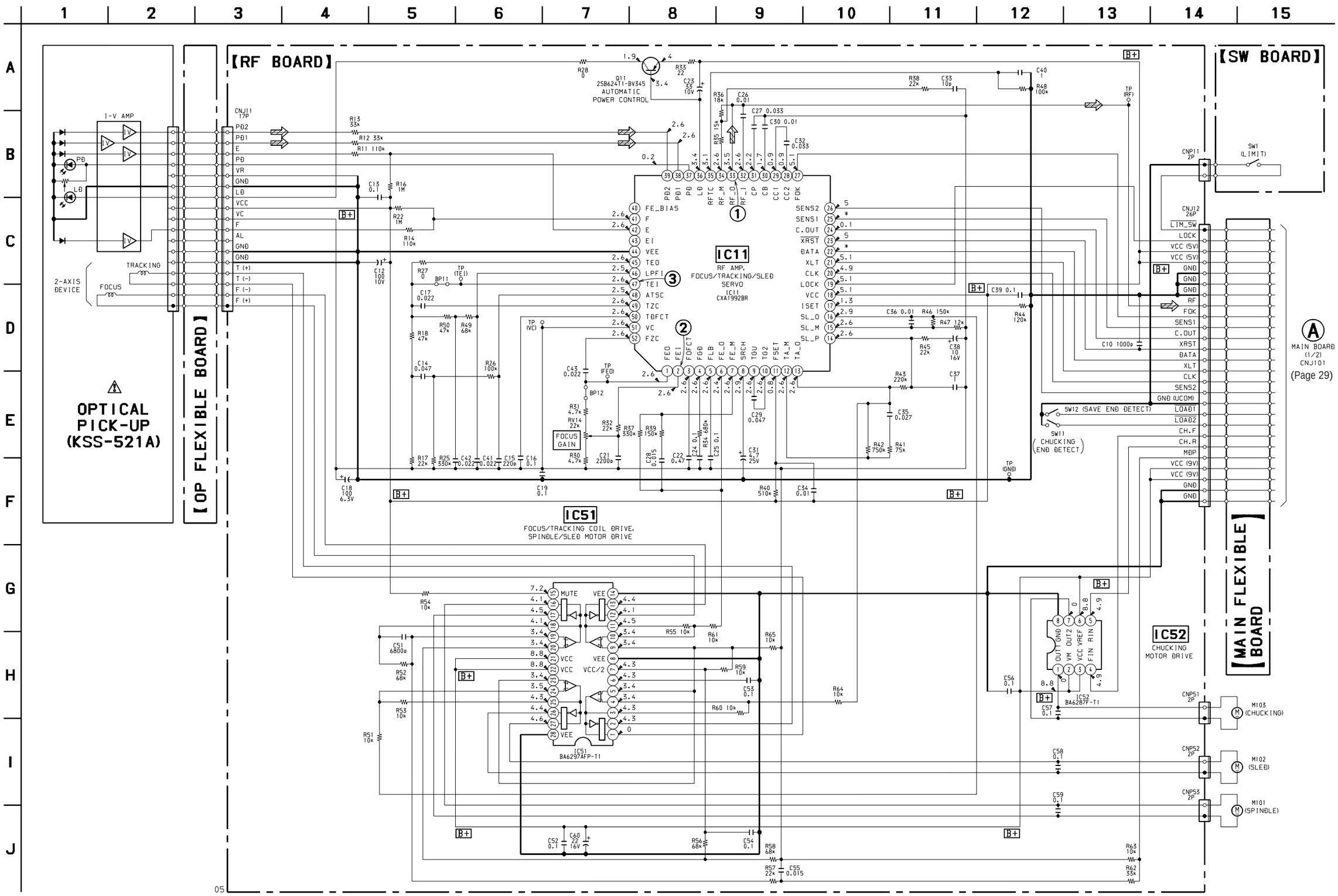
7-2. PRINTED WIRING BOARDS – RF Section –

• **Semiconductor Location**

Ref. No.	Location
IC11	C-6
IC51	B-7
IC52	G-4
Q11	D-6



7-3. SCHEMATIC DIAGRAM – RF Section – • See page 33 for Waveforms. • See page 34 for IC Block Diagrams.

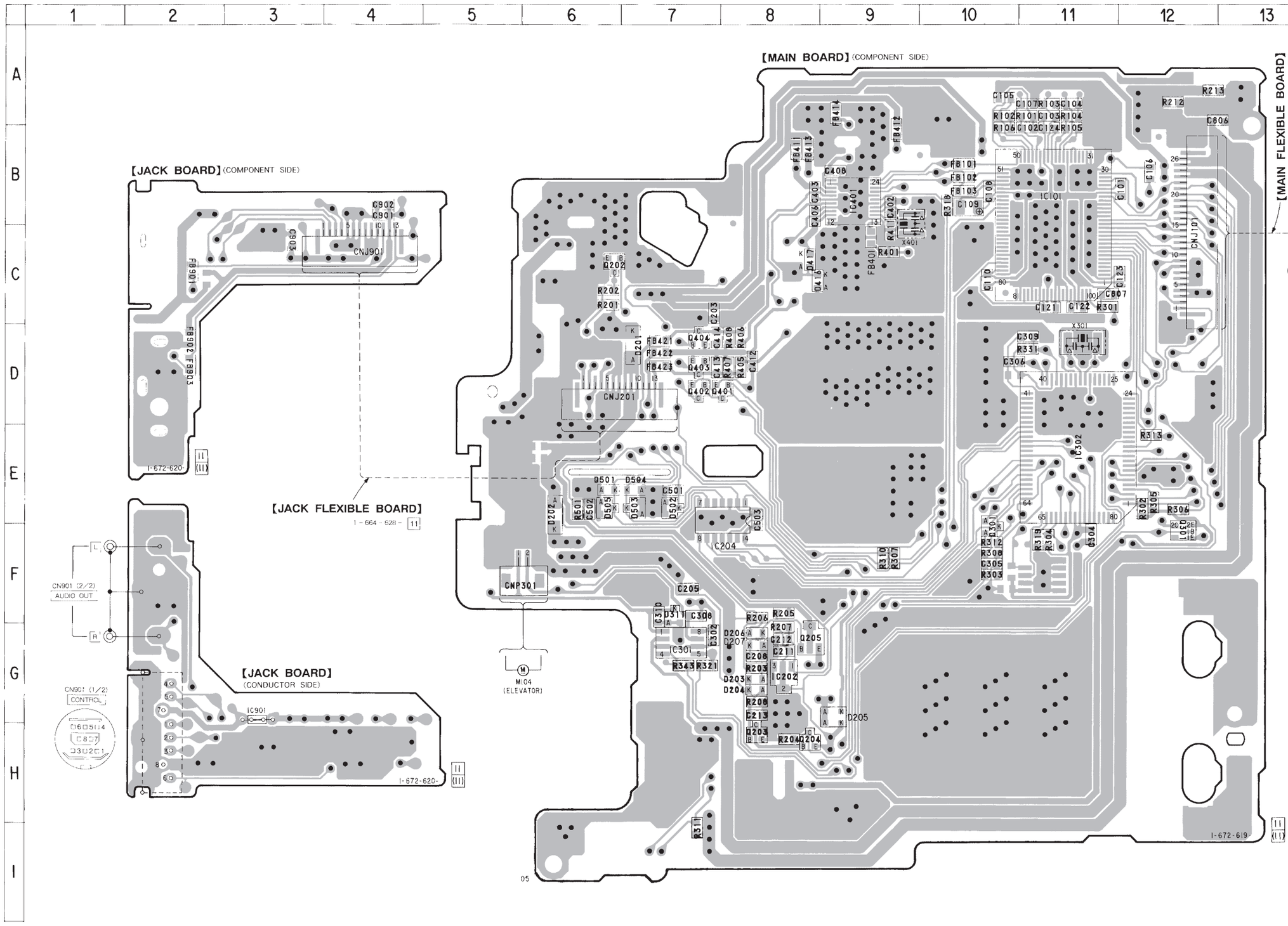


The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

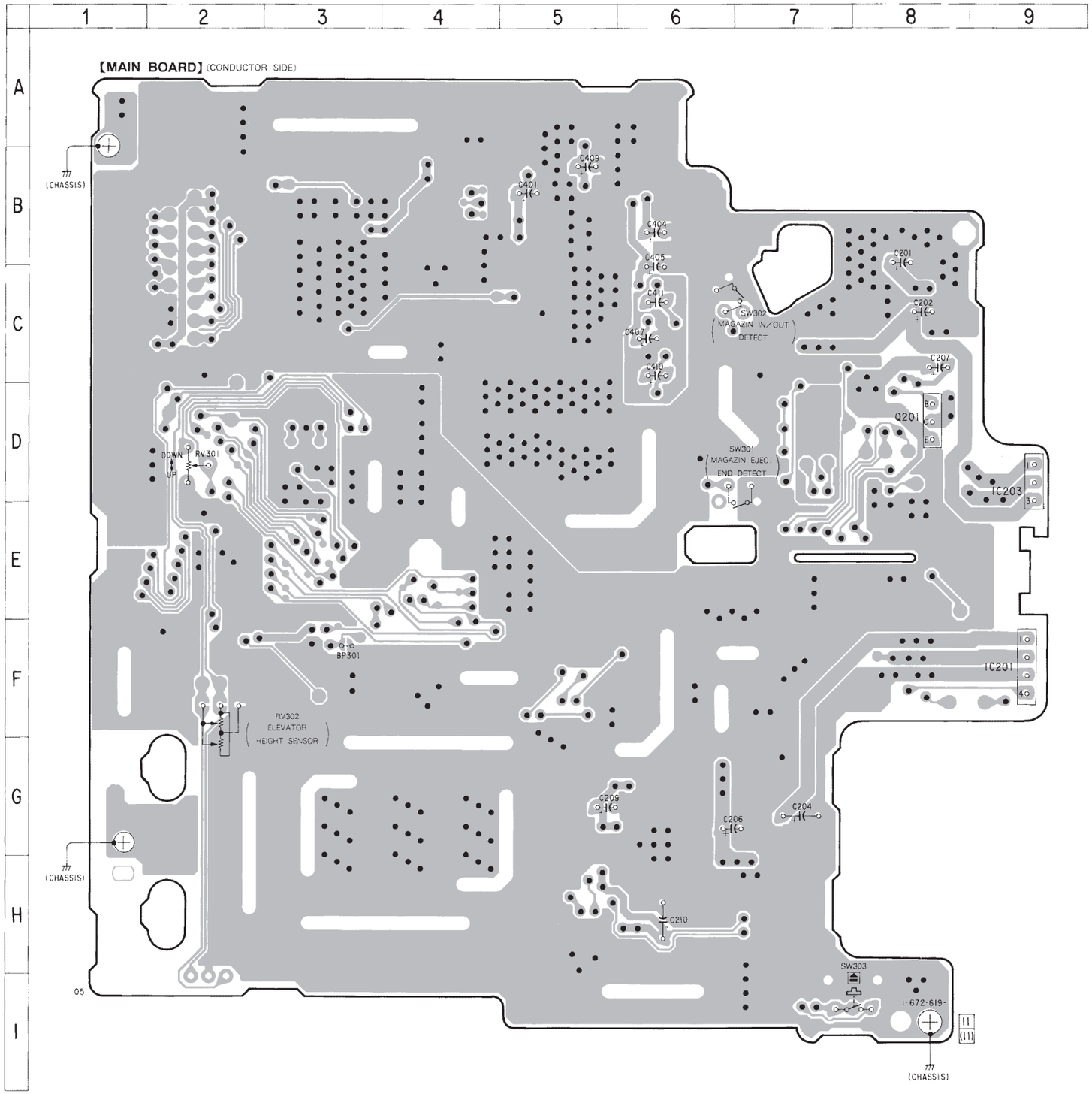
7-4. PRINTED WIRING BOARDS – MAIN (Component Side)/JACK Board –

- **Semiconductor Location**

Ref. No.	Location
D201	D-7
D202	E-6
D203	G-8
D204	G-8
D205	G-9
D206	G-8
D207	G-8
D301	F-10
D311	F-7
D416	C-8
D417	C-8
D501	E-6
D502	E-7
D503	E-7
D504	E-7
D505	E-6
IC101	B-11
IC202	G-8
IC204	E-8
IC301	G-7
IC302	E-11
IC401	B-9
Q202	C-6
Q203	H-8
Q204	H-8
Q205	G-8
Q301	F-12
Q401	D-8
Q402	D-7
Q403	D-7
Q404	D-7



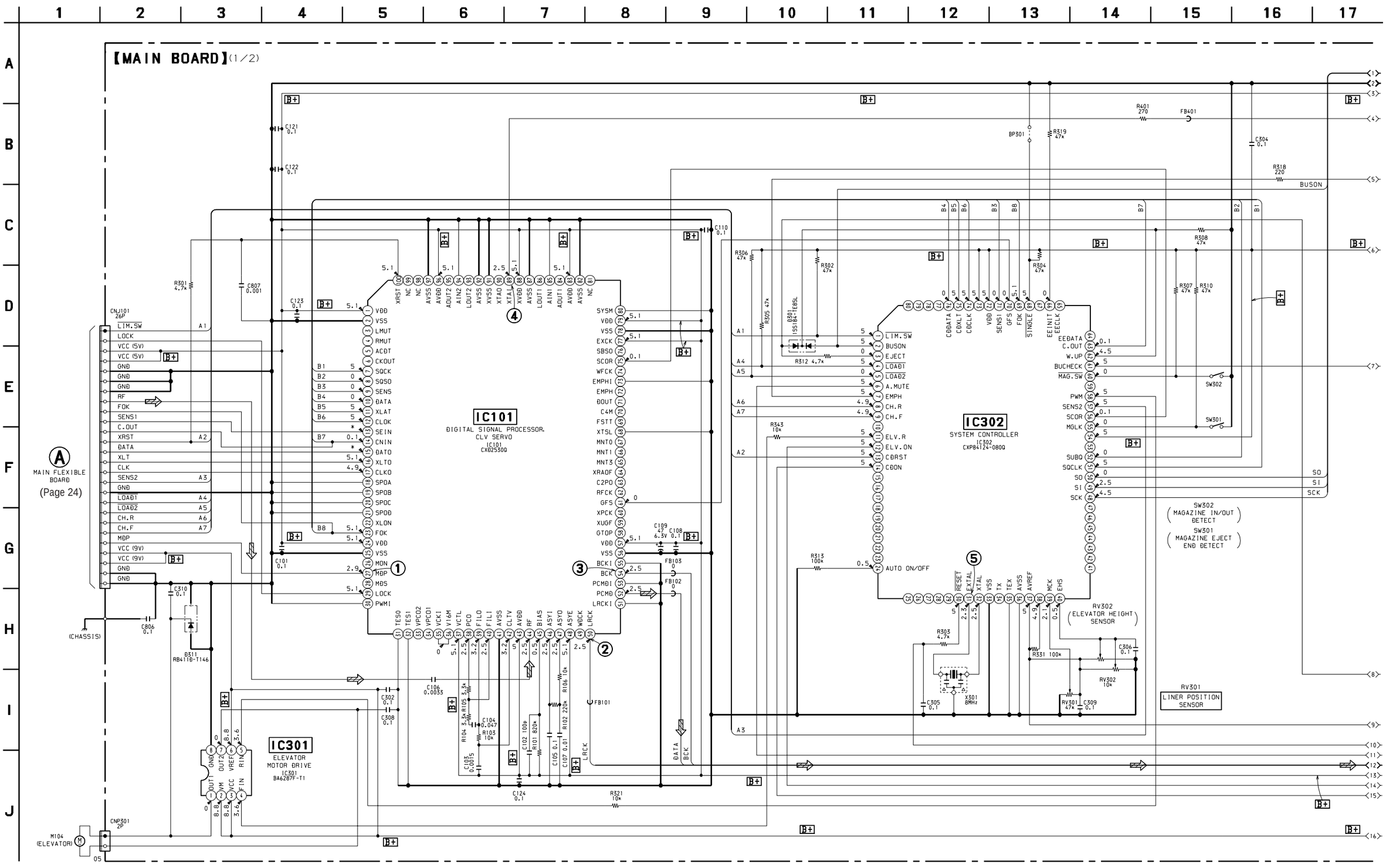
7-5. PRINTED WIRING BOARD – MAIN Board (Conductor Side) –



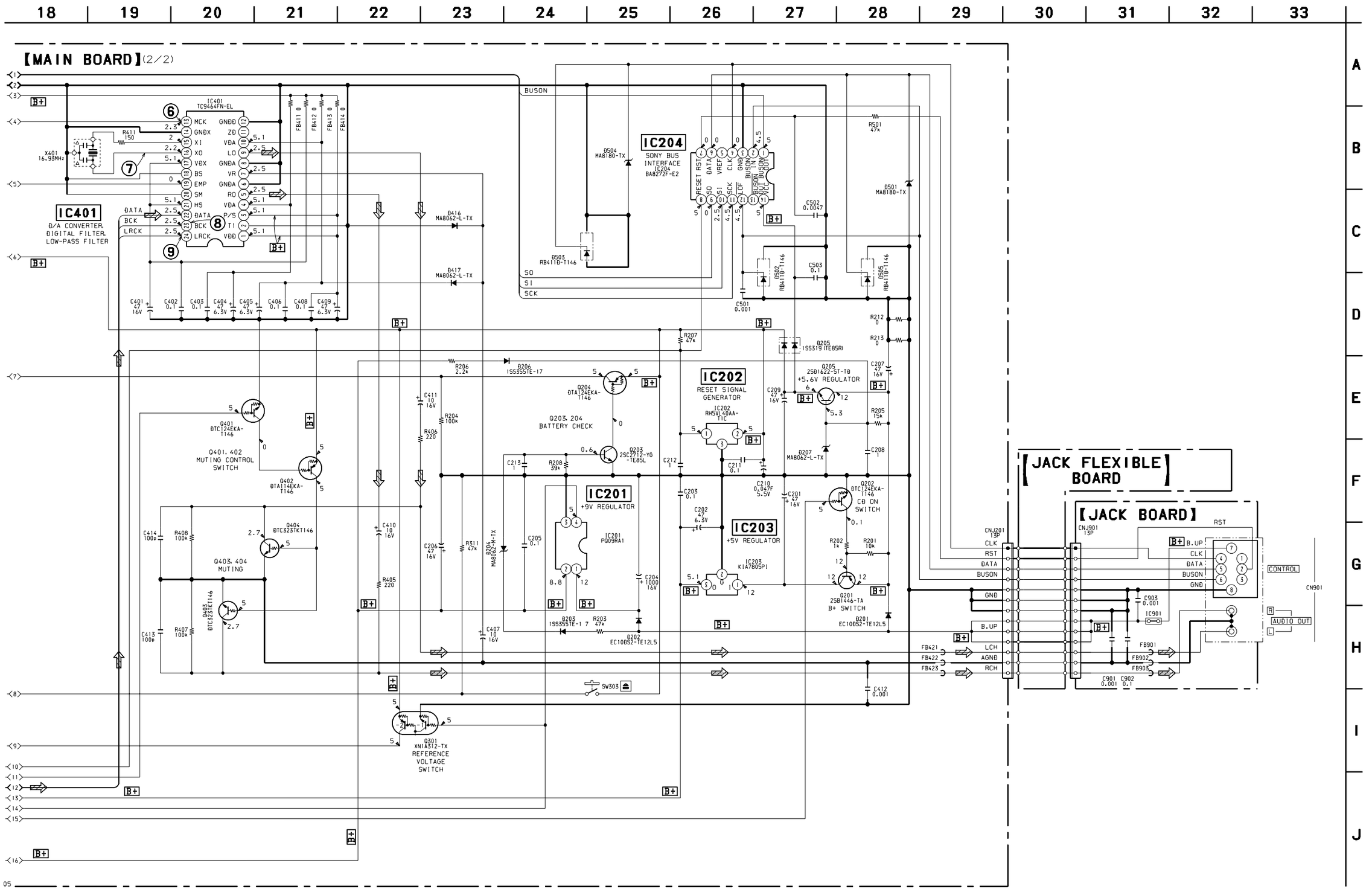
- **Semiconductor Location**

Ref. No.	Location
IC201	F-9
IC203	D-9
Q201	D-8

7-6. SCHEMATIC DIAGRAM – MAIN Section (1/2) – • See page 33 for Waveforms. • See page 35 for IC Block Diagrams.



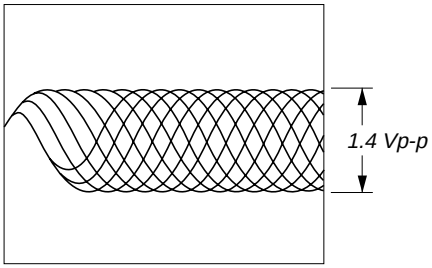
7-7. SCHEMATIC DIAGRAM – MAIN Section (2/2) – • See page 33 for Waveforms. • See page 35 for IC Block Diagrams.



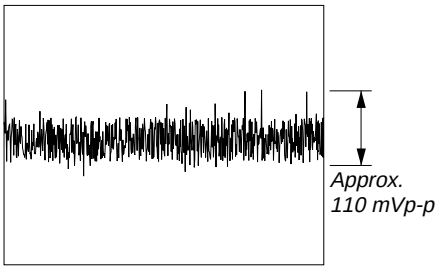
• **Waveforms**

– RF Board –

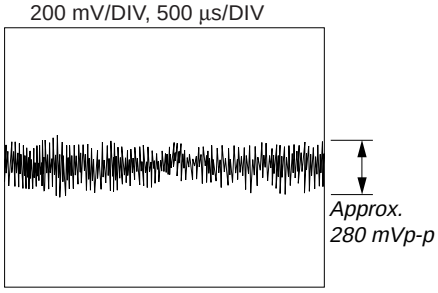
❶ IC11 ㉝ (RF O)
500 mV/DIV, 500 ns/DIV



❷ IC11 ② (FEI)
50 mV/DIV, 1 µs/DIV

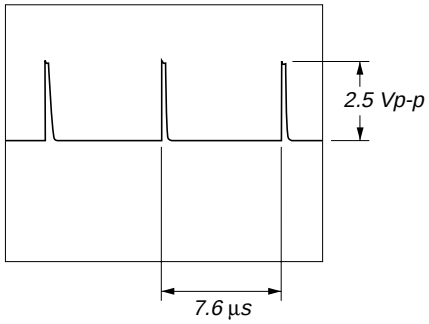


❸ IC11 ㊼ (TEI)
200 mV/DIV, 500 µs/DIV

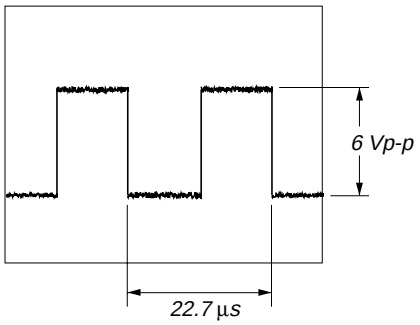


– MAIN Board (1/2) –

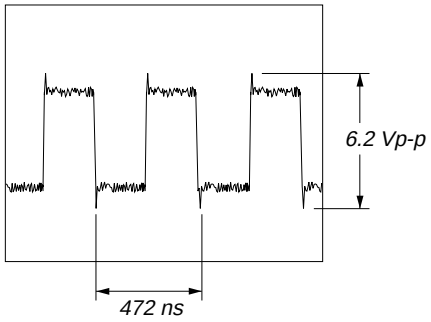
❶ IC101 ㉗ (MDP)



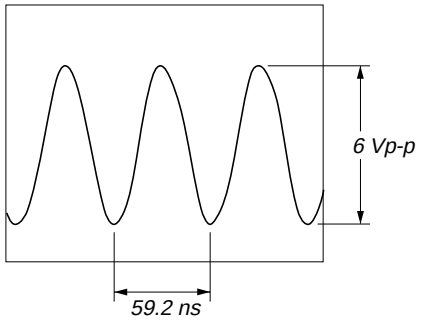
❷ IC101 ㊿ (LRCK)



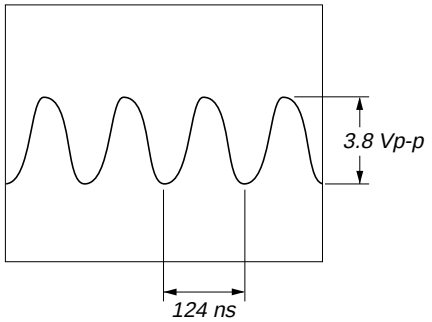
❸ IC101 ㊹ (BCK)



❹ IC101 ㊾ (XTAI)

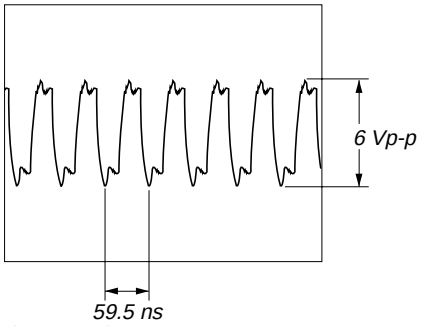


❺ IC302 ㉛ (EXTAL)

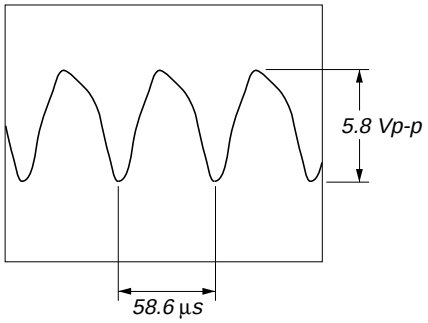


– MAIN Board (2/2) –

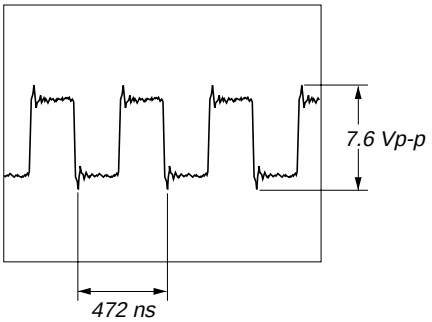
❻ IC401 ⑬ (MCK)



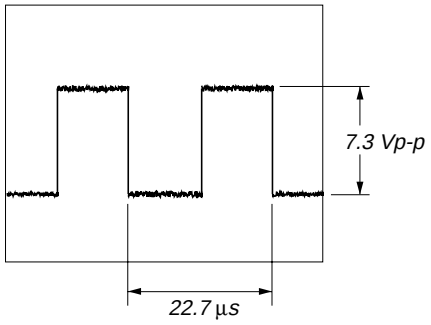
❼ IC401 ⑯ (XO)



❽ IC401 ㉓ (BCK)

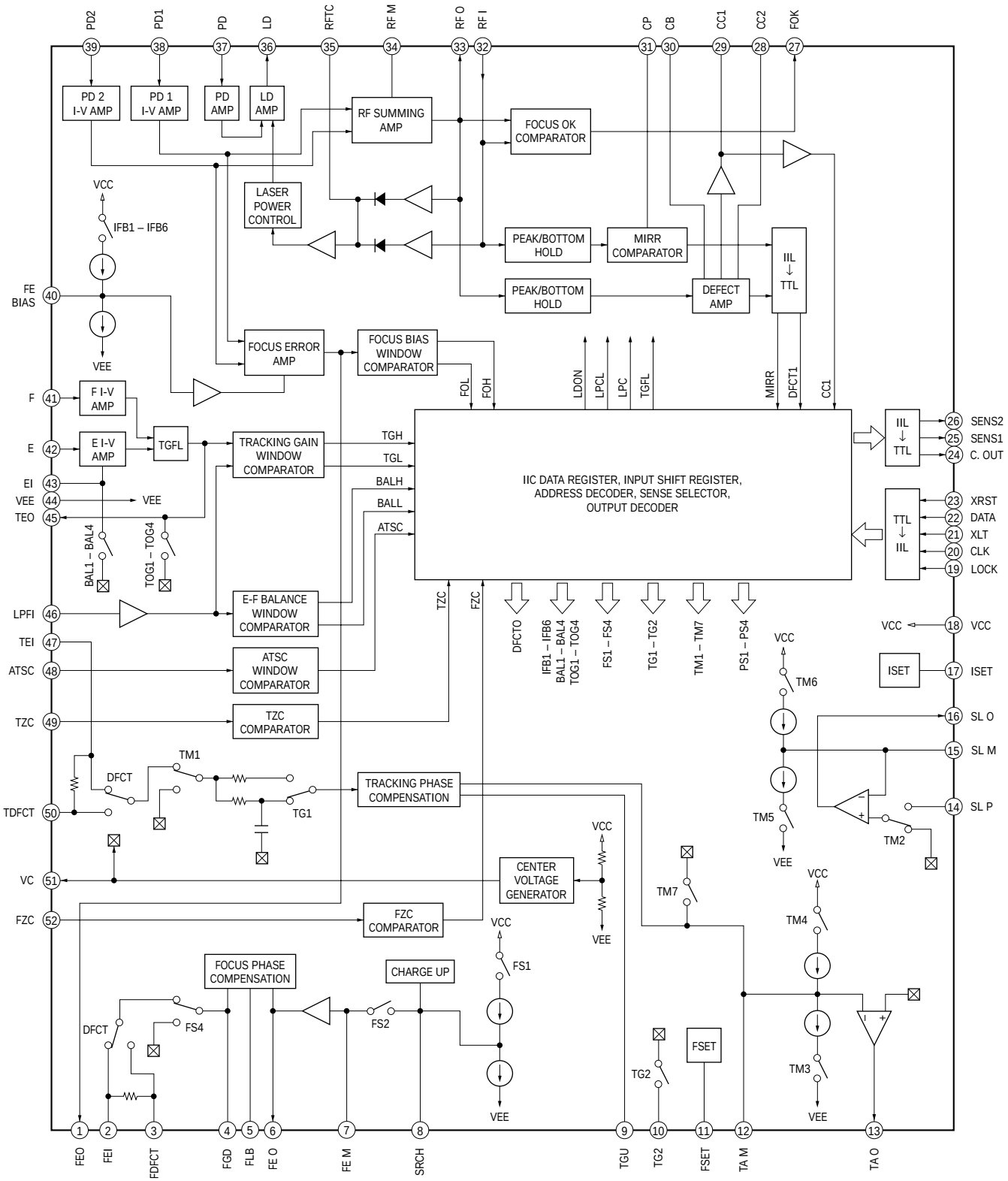


❾ IC401 ㉔ (LRCK)

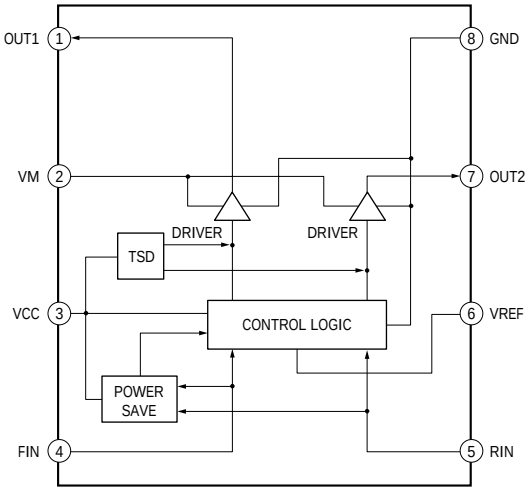


• **IC Block Diagrams**
– RF Board –

IC11 CXA1992BR

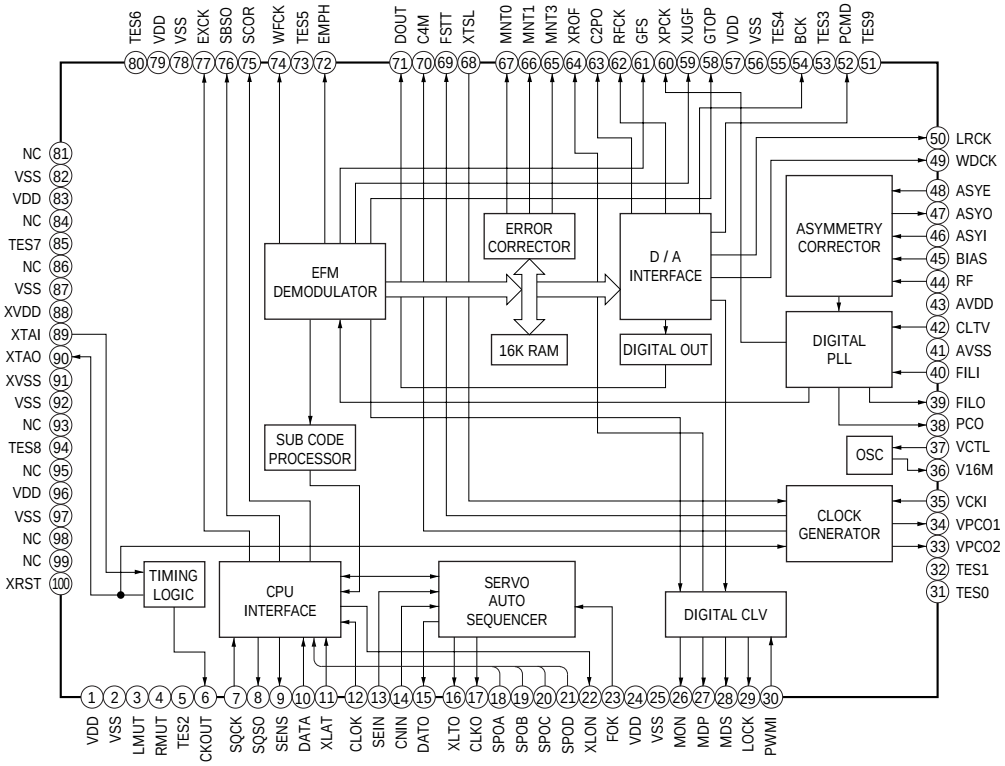


IC52 BA6287F

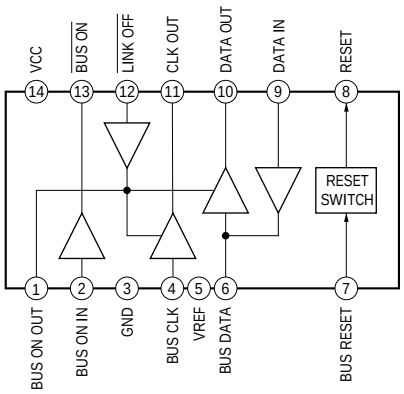


– MAIN Board –

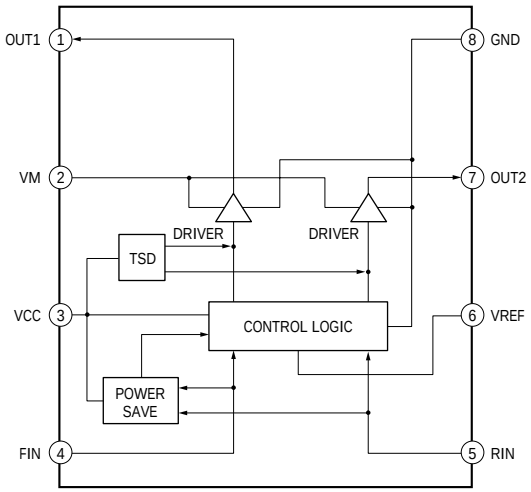
IC101 CXD2530Q



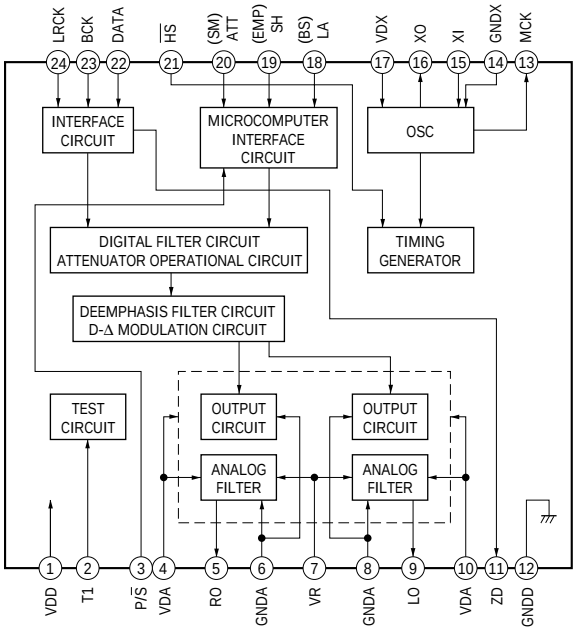
IC204 BA8272F-E2



IC301 BA6287F



IC401 TC9464FN-EL



7-8. IC PIN FUNCTION DESCRIPTION

• MAIN BOARD IC302 CXP84124-080Q (SYSTEM CONTROLLER)

Pin No.	Pin Name	I/O	Function
1	$\overline{\text{LIM.SW}}$	I	Sled limit in detect switch (SW1) input terminal "L": When the optical pick-up is inner position
2	BUSON	I	Bus on/off control signal input from the SONY bus interface (IC204) "H": bus on
3	EJECT	I	Eject switch (SW303) input terminal "H" active
4	$\overline{\text{LOAD1}}$	I	Save end detect switch (SW12) input terminal "L": When completion of the disc chucking operation
5	$\overline{\text{LOAD2}}$	I	Chucking end detect switch (SW11) input terminal "L": When completion of the disc chucking operation
6	A.MUTE	O	Audio line muting on/off control signal output terminal "H": muting on
7	EMPH	O	Emphasis mode output to the D/A converter (IC401) "L": emphasis on
8	CH.R	O	Motor drive signal (save direction) output to the chucking motor drive (IC52) "H" active *1
9	CH.F	O	Motor drive signal (load chucking direction) output to the chucking motor drive (IC52) "H" active *1
10	—	O	Not used (open)
11	ELV.R	O	Motor drive signal (elevator down direction) output to the elevator motor drive (IC301) "L" active *2
12	ELV.ON	O	Mechanism deck section power supply on/off control signal output "H": power on
13	$\overline{\text{CD RST}}$	O	System reset signal output to the CXA1992BR (IC11) and CXD2530Q (IC101) "L": reset
14	CDON	O	D/A converter and servo section power supply on/off control signal output "H": power on
15 to 23	—	O	Not used (open)
24	AUTO ON/OFF	I	Setting terminal for the automatic adjustment "L": automatic adjustment, "H": manual adjustment (fixed at "L" in this set)
25 to 29	—	O	Not used (open)
30	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC202) and SONY bus interface (IC204) "L": reset For several hundreds msec. after the power supply rises, "L" is input, then it changes to "H"
31	EXTAL	I	Main system clock input terminal (8 MHz)
32	XTAL	O	Main system clock output terminal (8 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal Not used (open)
35	TEX	I	Sub system clock input terminal Not used (fixed at "L")
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage (+5V) input terminal (for A/D converter)
38	ATRIBT	I	Selection input of the custom file, D-BASS, etc.
39	MCK	I	Input of signal for the fine adjustment (linear position sensor adjustment; RV301) of elevator position (A/D input)
40	EHS	I	Elevator height position detect input from the RV302 (elevator height sensor) (A/D input)
41 to 47	—	O	Not used (open)
48	SCK	I	Serial data transfer clock signal input from the SONY bus interface (IC204)
49	SI	I	Serial data input from the SONY bus interface (IC204)
50	SO	O	Serial data output to the SONY bus interface (IC204)
51	SQCLK	O	Subcode Q data reading clock signal output to the CXD2530Q (IC101)
52	SUBQ	I	Subcode Q data input from the CXD2530Q (IC101)
53	—	O	Not used (open)
54	—	I	Not used (fixed at "H")
55	MGLK	I	Magazine eject operation completion detect switch (SW301) input terminal "L": eject completed

Pin No.	Pin Name	I/O	Function
56	SCOR	I	Subcode sync (S0+S1) detection signal input from the CXD2530Q (IC101)
57	SENS2	I	Internal status signal (sense signal) input from the CXA1992BR (IC11)
58	PWM	O	Motor drive signal (elevator up direction) output to the elevator motor drive (IC301) "L" active *2
59	—	O	Not used (open)
60	$\overline{\text{MAG.SW}}$	I	Magazine in/out detect switch (SW302) input terminal "L": magazine detected
61	BUCHECK	I	Battery detection signal input terminal "H": battery on
62	W.UP	I	Bus on or eject switch (SW303) input terminal "H": bus on or eject switch pushing
63	C.OUT	I	Track number count signal input from the CXA1992BR (IC11)
64	EEDATA	I/O	Two-way data bus with the EEPROM Not used (open)
65	EECLK	O	Serial clock signal output to the EEPROM Not used (open)
66	EEINIT	I	Initialize signal input for the EEPROM "H": format Fixed at "L" in this set
67	—	O	Not used (open)
68	$\overline{\text{SINGLE}}$	I	Setting terminal for the single disc/multiple discs mode "L": single mode, "H": multiple discs mode (fixed at "H")
69	FOK	I	Focus OK signal input from the CXA1992BR (IC11) "L": NG, "H": OK
70	GFS	I	Guard frame sync signal input from the CXD2530Q (IC101) "L": NG, "H": OK
71	SENS1	I	Internal status signal (sense signal) input from the CXD2530Q (IC101)
72	VDD	—	Power supply terminal (+5V)
73	NC (VDD)	—	Connected to the power supply (+5V)
74	CDCLK	O	Serial data transfer clock signal output to the CXD2530Q (IC101)
75	CDXLT	O	Serial data latch pulse signal output to the CXD2530Q (IC101)
76	CDDATA	O	Serial data output to the CXD2530Q (IC101)
77 to 80	—	O	Not used (open)

*1 chucking motor (M103) control

Mode / Terminal	STOP	LOAD CHUCKING	SAVE	BRAKE
CH.F (pin ⑨)	"L"	"H"	"L"	"H"
CH.R (pin ⑧)	"L"	"L"	"H"	"H"

*2 elevator motor (M104) control

Mode / Terminal	STOP	ELEVATOR UP	ELEVATOR DOWN	BRAKE
PWM (pin ㊽)	"H"	"L"	"H"	"L"
ELV.R (pin ⑪)	"H"	"H"	"L"	"L"

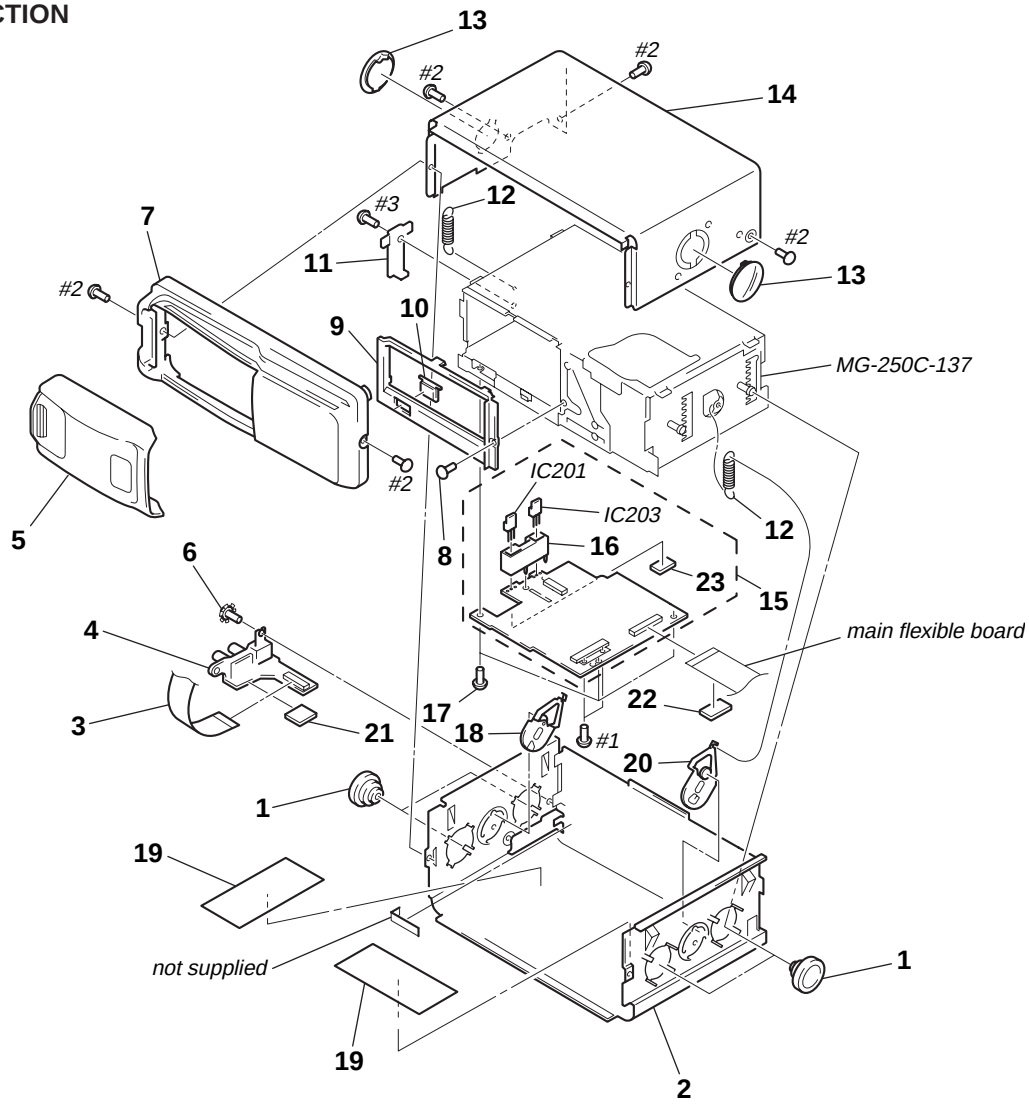
SECTION 8
EXPLODED VIEWS

NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

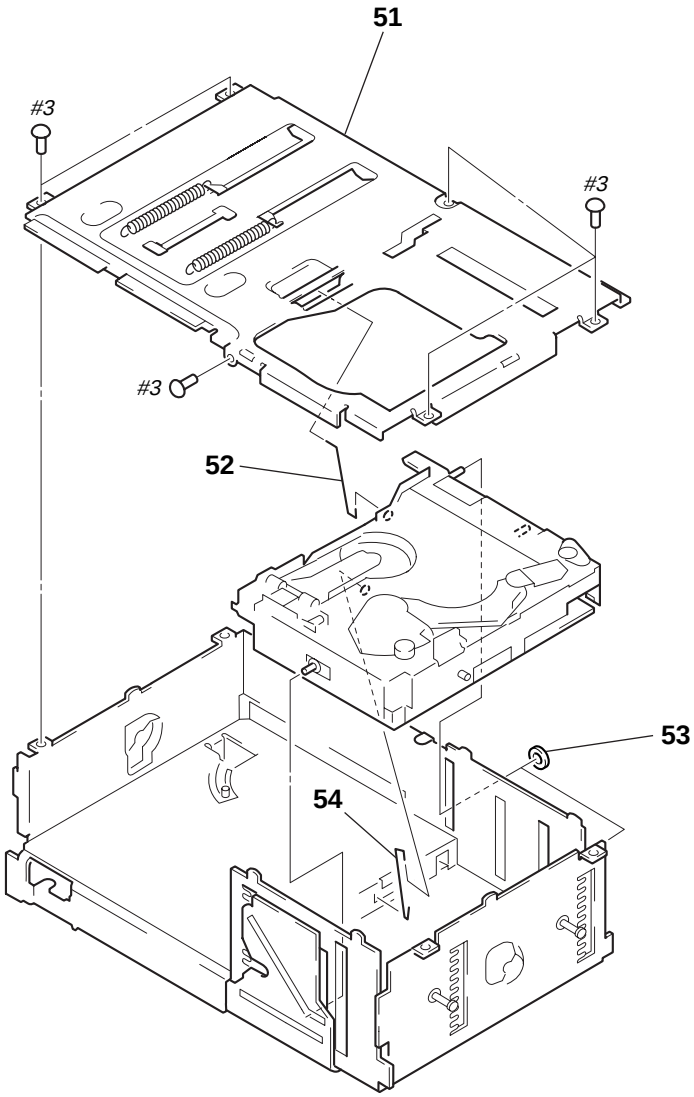
(1) COVER SECTION



Ref. No.	Part No.	Description	Remark
1	3-010-104-01	DAMPER (250)	
* 2	3-010-097-01	COVER (LOWER)	
3	1-664-628-11	JACK FLEXIBLE BOARD	
* 4	1-672-620-11	JACK BOARD	
5	X-3376-454-1	DOOR ASSY	
6	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT	
7	3-030-489-21	PANEL, FRONT	
8	3-012-388-01	SCREW (M2X3)	
* 9	3-010-105-01	ESCUTCHEON (US, Canadian)	
9	3-022-006-01	ESCUTCHEON (T) (EXCEPT US, Canadian)	
* 10	3-010-106-01	BUTTON (EJ) (⏏) (US, Canadian)	
10	3-022-007-01	BUTTON (EJT) (⏏) (EXCEPT US, Canadian)	
* 11	3-022-012-01	HEAT SINK (T)	
12	3-010-103-01	SPRING (FL), TENSION	
13	3-010-101-01	LEVER (FL)	
* 14	3-010-096-01	COVER (UPPER)	

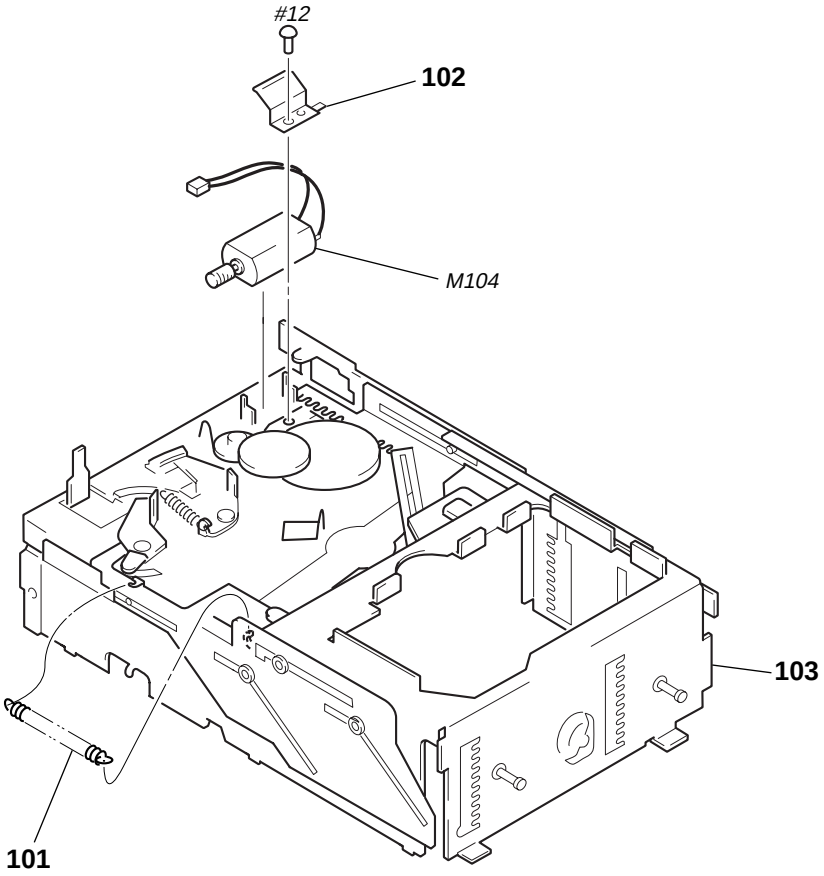
Ref. No.	Part No.	Description	Remark
* 15	A-3317-606-A	MAIN BOARD, COMPLETE	
* 16	3-022-694-01	HOLDER (TR3)	
17	3-935-636-11	SCREW (FP)	
18	X-3373-215-1	ARM (FL) ASSY (US, Canadian)	
18	X-3375-357-1	ARM (FLT) ASSY (EXCEPT US, Canadian)	
* 19	3-013-658-01	SHEET (FJ), PROTECTION	
20	X-3373-986-1	ARM (FR) ASSY (US, Canadian)	
20	X-3375-360-1	ARM (FRT) ASSY (EXCEPT US, Canadian)	
* 21	3-024-065-01	CUSHION (EJECT) (EXCEPT US, Canadian)	
21	3-350-124-01	CUSHION (EJECT) (US, Canadian)	
22	3-024-067-01	CUSHION (T), BATTERY (EXCEPT US, Canadian)	
22	3-911-215-02	SHEET (LEAD RETAINER) (US, Canadian)	
23	3-028-802-01	SPACER (MOUNT 30)	
IC201	8-759-054-12	IC PQ09RA1	
IC203	8-759-324-40	IC KIA7805PI	

(2) MECHANISM DECK SECTION-1 (MG-250C-137)



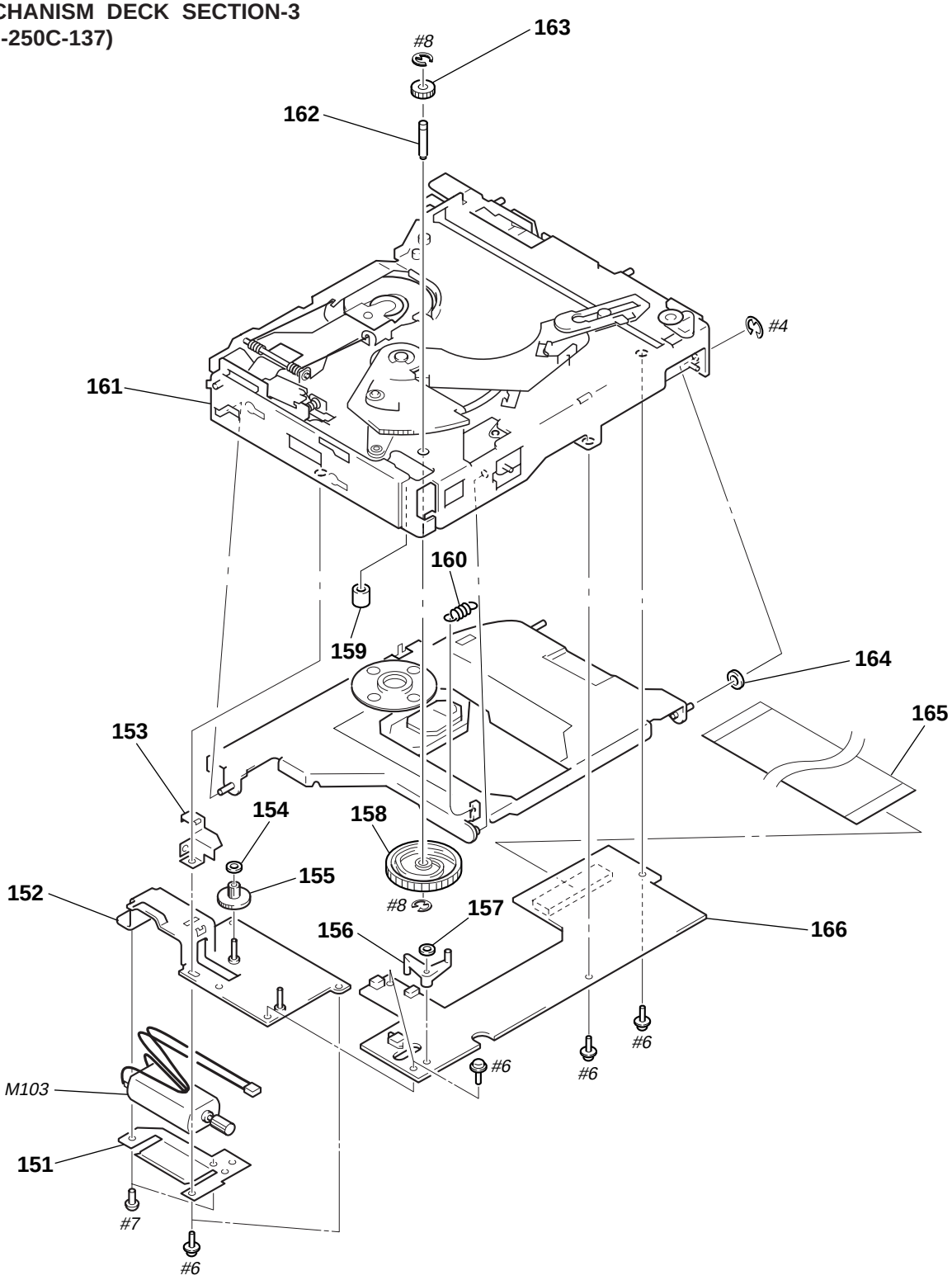
Ref. No.	Part No.	Description	Remark
51	X-3375-497-1	CHASSIS (U) SUB ASSY	
52	3-024-161-01	SPRING (SUT)	
53	4-965-759-01	WASHER, POLYETHYLENE	
54	3-011-997-01	SPRING (STOPPER. LOWER)	

(3) MECHANISM DECK SECTION-2 (MG-250C-137)



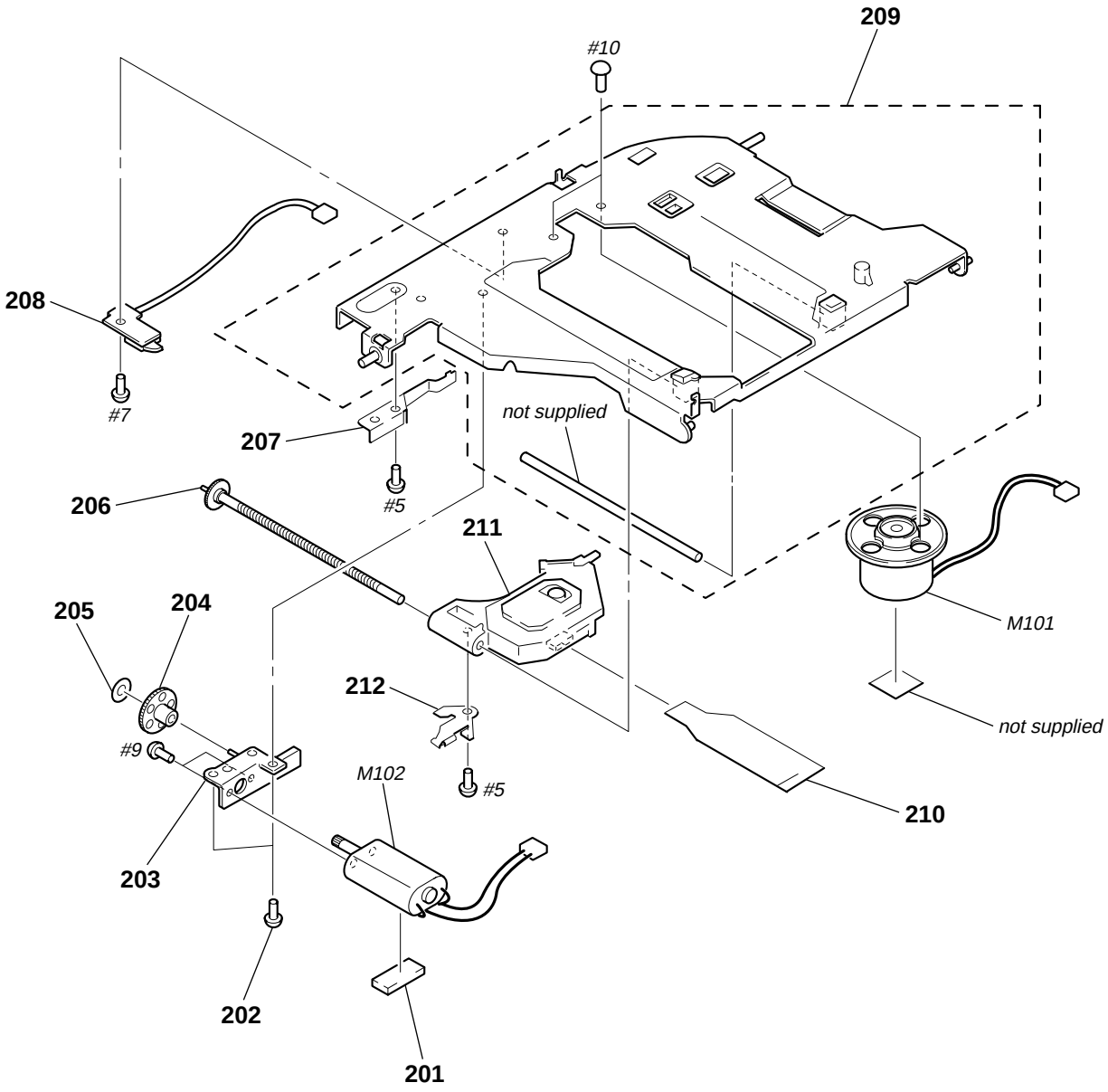
Ref. No.	Part No.	Description	Remark
101	3-024-170-01	SPRING (SB), TENSION	
* 102	3-024-172-01	BRACKET (EVM)	
103	X-3375-498-4	CHASSIS (D) SUB ASSY	
M104	A-3301-123-A	ELJ MOTOR ASSY (ELEVATOR)	

(4) MECHANISM DECK SECTION-3 (MG-250C-137)



Ref. No.	Part No.	Description	Remark
* 151	3-024-150-01	RETAINER (CHM)	
* 152	X-3375-445-1	BRACKET (CHM) ASSY	
153	3-010-270-01	COVER (CHM)	
154	3-321-813-01	WASHER, COTTER POLYETHYLENE	
155	3-017-139-01	GEAR (WORM LOAD A)	
156	3-010-255-01	ARM (LSW)	
157	3-573-936-00	STOPPER, REEL	
158	X-3373-552-1	GEAR (LOAD 1) ASSY	
159	3-010-252-01	ROLLER (CRE)	
160	3-010-268-01	SPRING (DH), TENSION	
* 161	A-3290-194-F	CHASSIS (EVY) (MAIN) ASSY	
162	3-010-254-01	SHAFT (ROTARY PREVENTION C)	
163	3-010-253-01	GEAR (LOMINI)	
164	3-701-438-11	WASHER, 2.5	
165	1-664-627-11	MAIN FLEXIBLE BOARD	
* 166	A-3313-586-A	RF BOARD, COMPLETE	
M103	A-3301-123-A	ELJ MOTOR ASSY (CHUCKING)	

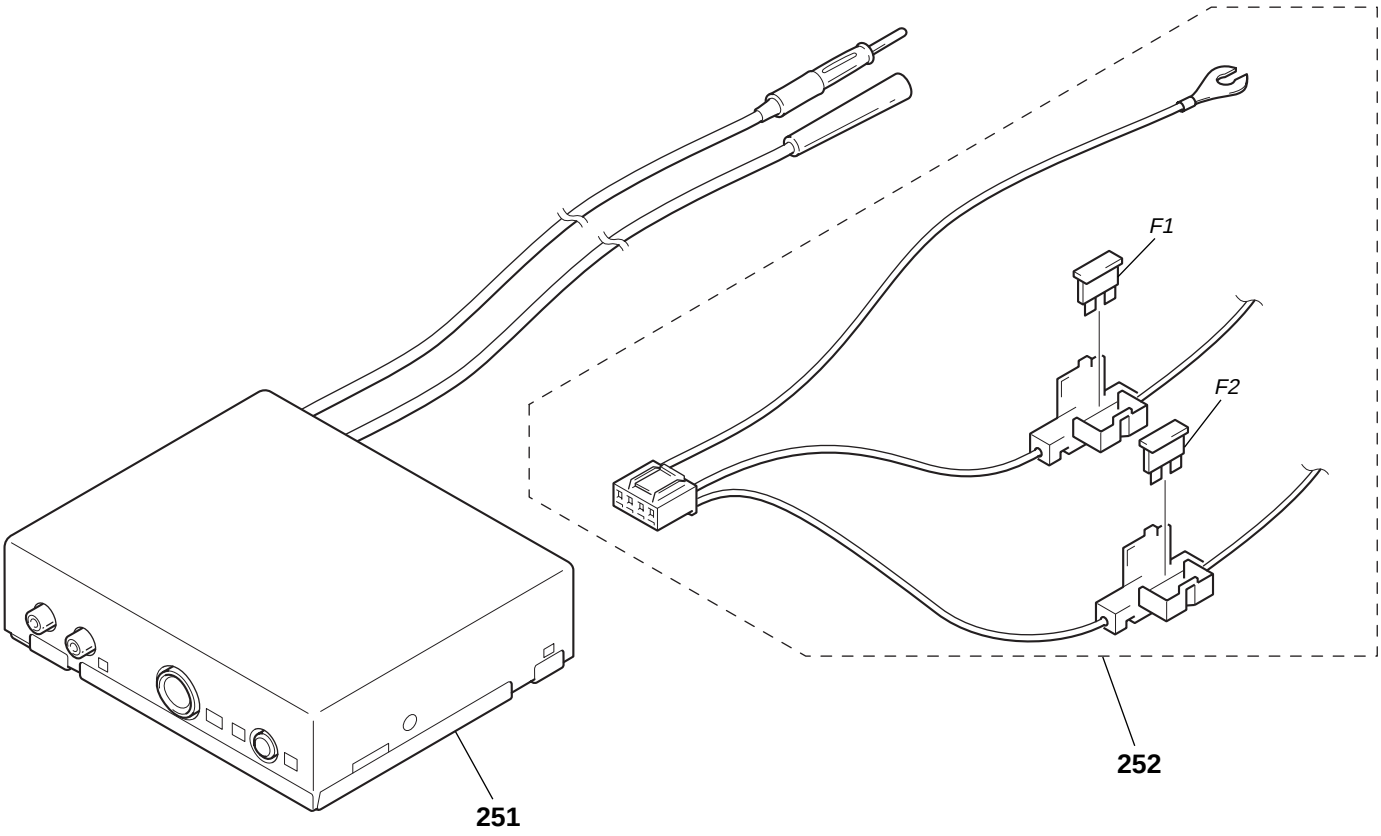
(5) MECHANISM DECK SECTION-4 (MG-250C-137)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
201	3-911-215-02	SHEET (LEAD RETAINER)	
202	3-920-362-01	SCREW (ESCUTCHEON)	
203	X-3373-229-1	BASE (SLED) ASSY	
204	3-010-258-01	GEAR (SLED MID)	
205	3-573-936-00	STOPPER, REEL	
206	A-3291-958-A	SHAFT (SLED) ASSY	
207	3-010-263-01	DETENT (SHAFT THRUST)	
* 208	1-664-104-11	SW BOARD	
* 209	A-3301-077-A	BASE (OPT) (J) ASSY	
210	1-664-626-11	OP FLEXIBLE BOARD	
⚠211	8-820-010-05	OPTICAL PICK-UP KSS-521A/J2RP	
212	3-010-262-01	DETENT (SLED)	
M101	A-3291-956-A	MOTOR SUB ASSY, SPINDLE	
M102	A-3291-955-A	MOTOR SUB ASSY, SLED	

(6) HIDEAWAY UNIT SECTION



Ref. No.	Part No.	Description	Remark
251	1-473-879-13	RF UNIT (HIDEAWAY) (US, Canadian)	
251	1-473-879-31	RF UNIT (HIDEAWAY) (EXCEPT US, Canadian)	
252	1-777-519-12	CORD (WITH CONNECTOR) (POWER) (US, Canadian)	
252	1-777-519-31	CORD (WITH CONNECTOR) (POWER) (EXCEPT US, Canadian)	
F1	1-532-731-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A/32V)	
F2	1-532-798-11	FUSE (BLADE TYPE) (AUTO FUSE) (1A/32V)	

SECTION 9
ELECTRICAL PARTS LIST

JACK **MAIN**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA. . : µA. . uPA. . : µPA. .
  uPB. . : µPB. . uPC. . : µPC. .
  uPD. . : µPD. .
- CAPACITORS
  uF: µF
- COILS
  uH: µH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description			Remark
*	1-672-620-11	JACK BOARD			
		**********			
		< CAPACITOR >			
C901	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C902	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C903	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CN901	1-779-077-11	PLUG, CONNECTOR (CONTROL, AUDIO OUT)			
CNJ901	1-778-775-21	CONNECTOR, FPC 13P			
		< FERRITE BEAD >			
FB901	1-500-445-21	FERRITE	0uH		
FB902	1-500-445-21	FERRITE	0uH		
FB903	1-500-445-21	FERRITE	0uH		
		< IC LINK >			
IC901	1-532-686-21	LINK, IC			
**********					
*	A-3317-606-A	MAIN BOARD, COMPLETE			
		**********			
*	3-022-694-01	HOLDER (TR3)			
	3-028-802-01	SPACER (MOUNT 30)			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C102	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C103	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C104	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C105	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C106	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C107	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C108	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C109	1-110-569-11	TANTAL. CHIP	47uF	20%	6.3V
C110	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C121	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C122	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C123	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C124	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C201	1-124-589-11	ELECT	47uF	20%	16V
C202	1-126-513-11	ELECT	47uF	20%	6.3V
C203	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C204	1-115-466-00	ELECT	1000uF	20%	16V
C205	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C206	1-124-589-11	ELECT	47uF	20%	16V
C207	1-124-589-11	ELECT	47uF	20%	16V
C208	1-164-346-11	CERAMIC CHIP	1uF		16V
C209	1-124-589-11	ELECT	47uF	20%	16V
C210	1-125-701-11	DOUBLE LAYER	0.047F		5.5V
C211	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C212	1-164-346-11	CERAMIC CHIP	1uF		16V
C213	1-164-346-11	CERAMIC CHIP	1uF		16V
C302	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C304	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C305	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C306	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C308	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C309	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C310	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C401	1-124-589-11	ELECT	47uF	20%	16V
C402	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C403	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C404	1-126-513-11	ELECT	47uF	20%	6.3V
C405	1-126-513-11	ELECT	47uF	20%	6.3V
C406	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C407	1-126-157-11	ELECT	10uF	20%	16V
C408	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C409	1-126-513-11	ELECT	47uF	20%	6.3V
C410	1-126-157-11	ELECT	10uF	20%	16V
C411	1-126-157-11	ELECT	10uF	20%	16V
C412	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C413	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C414	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C501	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C502	1-163-029-11	CERAMIC CHIP	0.0047uF		50V
C503	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C806	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C807	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		< CONNECTOR >			
CNJ101	1-770-351-11	CONNECTOR, FPC 26P			
CNJ201	1-770-350-21	CONNECTOR, FPC 13P			
* CNP301	1-580-055-21	PIN, CONNECTOR (SMD) 2P			

MAIN

Ref. No.	Part No.	Description	Remark
		< DIODE >	
D201	8-719-210-33	DIODE EC10DS2	
D202	8-719-210-33	DIODE EC10DS2	
D203	8-719-988-61	DIODE 1SS355TE-17	
D204	8-719-422-64	DIODE MA8062-M	
D205	8-719-038-48	DIODE 1SS319 (TE85R)	
D206	8-719-988-61	DIODE 1SS355TE-17	
D207	8-719-422-62	DIODE MA8062-L-TX	
D301	8-719-801-78	DIODE 1SS184	
D311	8-719-975-40	DIODE RB411D	
D416	8-719-422-62	DIODE MA8062-L-TX	
D417	8-719-422-62	DIODE MA8062-L-TX	
D501	8-719-017-94	DIODE MA8180	
D502	8-719-975-40	DIODE RB411D	
D503	8-719-975-40	DIODE RB411D	
D504	8-719-017-94	DIODE MA8180	
D505	8-719-975-40	DIODE RB411D	
		< FERRITE BEAD/SHORT >	
FB101	1-500-445-21	FERRITE 0uH	
FB102	1-500-445-21	FERRITE 0uH	
FB103	1-500-445-21	FERRITE 0uH	
FB401	1-500-445-21	FERRITE 0uH	
FB411	1-216-295-00	SHORT 0	
FB412	1-216-295-00	SHORT 0	
FB413	1-216-295-00	SHORT 0	
FB414	1-216-295-00	SHORT 0	
FB421	1-500-445-21	FERRITE 0uH	
FB422	1-500-445-21	FERRITE 0uH	
FB423	1-500-445-21	FERRITE 0uH	
		< IC >	
IC101	8-752-384-15	IC CXD2530Q	
IC201	8-759-054-12	IC PQ09RA1	
IC202	8-759-443-41	IC RH5VL40AA-T1C	
IC203	8-759-324-40	IC KIA7805PI	
IC204	8-759-444-86	IC BA8272F-E2	
IC301	8-759-040-83	IC BA6287F	
IC302	8-752-902-61	IC CXP84124-080Q	
IC401	8-759-494-78	IC TC9464FN-EL	
		< TRANSISTOR >	
Q201	8-729-016-83	TRANSISTOR 2SB1446	
Q202	8-729-901-00	TRANSISTOR DTC124EK	
Q203	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q204	8-729-027-31	TRANSISTOR DTA124EKA-T146	
Q205	8-729-822-05	TRANSISTOR 2SD1622-ST-TD	
Q301	8-729-020-67	TRANSISTOR XN1A312-TX	
Q401	8-729-901-00	TRANSISTOR DTC124EK	
Q402	8-729-027-23	TRANSISTOR DTA114EKA-T146	
Q403	8-729-015-39	TRANSISTOR DTC323TK	
Q404	8-729-015-39	TRANSISTOR DTC323TK	
		< RESISTOR >	
R101	1-216-119-00	METAL CHIP 820K 5% 1/10W	
R102	1-216-105-00	RES, CHIP 220K 5% 1/10W	
R103	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R104	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R105	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R106	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R201	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R202	1-216-049-11	RES, CHIP 1K 5% 1/10W	
R203	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R204	1-216-097-00	RES, CHIP 100K 5% 1/10W	
R205	1-216-077-00	METAL CHIP 15K 5% 1/10W	
R206	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R207	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R208	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R212	1-216-295-00	SHORT 0	
R213	1-216-295-00	SHORT 0	
R301	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
R302	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R303	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
R304	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R305	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R306	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R307	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R308	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R310	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R311	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R312	1-216-065-00	RES, CHIP 4.7K 5% 1/10W	
R313	1-216-097-00	RES, CHIP 100K 5% 1/10W	
R318	1-216-033-00	METAL CHIP 220 5% 1/10W	
R319	1-216-089-00	RES, CHIP 47K 5% 1/10W	
R321	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R331	1-216-097-00	RES, CHIP 100K 5% 1/10W	
R343	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R401	1-216-035-00	METAL CHIP 270 5% 1/10W	
R405	1-216-033-00	METAL CHIP 220 5% 1/10W	
R406	1-216-033-00	METAL CHIP 220 5% 1/10W	
R407	1-216-097-00	RES, CHIP 100K 5% 1/10W	
R408	1-216-097-00	RES, CHIP 100K 5% 1/10W	
R411	1-216-029-00	METAL CHIP 150 5% 1/10W	
R501	1-216-089-00	RES, CHIP 47K 5% 1/10W	
		< VARIABLE RESISTOR >	
RV301	1-223-834-11	RES, ADJ, CARBON 47.0K	
RV302	1-225-412-11	RES, VAR, SLIDE 10K (ELEVATOR HEIGHT SENSOR)	
		< SWITCH >	
SW301	1-771-540-11	SWITCH, PUSH (1 KEY) (MAGAZINE EJECT END DETECT)	
SW302	1-771-540-11	SWITCH, PUSH (1 KEY) (MAGAZINE IN/OUT DETECT)	
SW303	1-571-532-21	SWITCH, TACTIL (⏏)	
		< VIBRATOR >	
X301	1-767-261-21	VIBRATOR, CERAMIC (8MHz)	
X401	1-767-511-11	VIBRATOR, CERAMIC (16.93MHz)	

****

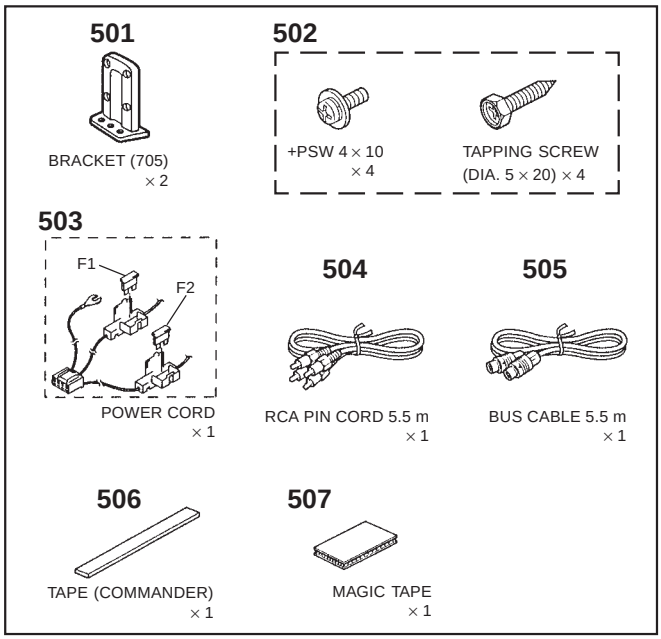
Ref. No.	Part No.	Description			Remark
*	A-3313-586-A	RF BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C10	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C12	1-113-500-11	TANTAL. CHIP	100uF	20%	10V
C13	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C14	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C15	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C16	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C17	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C18	1-111-253-11	TANTAL. CHIP	100uF	20%	6.3V
C19	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C21	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C22	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C23	1-113-682-11	TANTAL. CHIP	33uF	20%	10V
C24	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C25	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C26	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C27	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C28	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C29	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C30	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C31	1-113-987-11	TANTAL. CHIP	4.7uF	20%	25V
C32	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C33	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C34	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C35	1-104-700-11	CERAMIC CHIP	0.027uF	10%	16V
C36	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C37	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C38	1-104-913-11	TANTAL. CHIP	10uF	20%	16V
C39	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C40	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C41	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C42	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C43	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C51	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C52	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C53	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C54	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C55	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C56	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C57	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C58	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C59	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C60	1-104-914-11	TANTAL. CHIP	22uF	20%	16V
		< CONNECTOR >			
CNJ11	1-778-776-21	CONNECTOR, FPC 17P			
CNJ12	1-778-777-21	CONNECTOR, FPC 26P			
* CNP11	1-580-055-21	PIN, CONNECTOR (SMD) 2P			
* CNP51	1-580-055-21	PIN, CONNECTOR (SMD) 2P			
* CNP52	1-580-055-21	PIN, CONNECTOR (SMD) 2P			
* CNP53	1-580-055-21	PIN, CONNECTOR (SMD) 2P			
		< IC >			
IC11	8-752-082-14	IC CXA1992BR			
IC51	8-759-071-79	IC BA6297AFP			
IC52	8-759-040-83	IC BA6287F			
		< TRANSISTOR >			
Q11	8-729-141-48	TRANSISTOR 2SB624-BV345			
		< RESISTOR >			
R11	1-218-348-11	RES, CHIP	110K	5%	1/16W
R12	1-216-839-11	METAL CHIP	33K	5%	1/16W
R13	1-216-839-11	METAL CHIP	33K	5%	1/16W
R14	1-218-348-11	RES, CHIP	110K	5%	1/16W
R16	1-216-857-11	METAL CHIP	1M	5%	1/16W
R17	1-216-837-11	METAL CHIP	22K	5%	1/16W
R18	1-216-841-11	METAL CHIP	47K	5%	1/16W
R22	1-216-857-11	METAL CHIP	1M	5%	1/16W
R25	1-216-851-11	METAL CHIP	330K	5%	1/16W
R26	1-216-845-11	METAL CHIP	100K	5%	1/16W
R27	1-216-295-00	SHORT	0		
R28	1-216-295-00	SHORT	0		
R30	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R31	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R32	1-216-837-11	METAL CHIP	22K	5%	1/16W
R33	1-216-158-00	RES, CHIP	22	5%	1/8W
R34	1-216-855-11	METAL CHIP	680K	5%	1/16W
R35	1-216-835-11	METAL CHIP	15K	5%	1/16W
R36	1-216-836-11	METAL CHIP	18K	5%	1/16W
R37	1-216-851-11	METAL CHIP	330K	5%	1/16W
R38	1-216-837-11	METAL CHIP	22K	5%	1/16W
R39	1-216-847-11	METAL CHIP	150K	5%	1/16W
R40	1-218-273-11	RES, CHIP	510K	5%	1/16W
R41	1-218-296-11	RES, CHIP	75K	5%	1/16W
R42	1-202-930-11	RES, CHIP	750K	5%	1/16W
R43	1-216-849-11	METAL CHIP	220K	5%	1/16W
R44	1-216-846-11	METAL CHIP	120K	5%	1/16W
R45	1-216-837-11	METAL CHIP	22K	5%	1/16W
R46	1-216-847-11	METAL CHIP	150K	5%	1/16W
R47	1-216-834-11	METAL CHIP	12K	5%	1/16W
R48	1-216-845-11	METAL CHIP	100K	5%	1/16W
R49	1-216-093-00	RES, CHIP	68K	5%	1/10W
R50	1-216-841-11	METAL CHIP	47K	5%	1/16W
R51	1-216-073-00	METAL CHIP	10K	5%	1/10W
R52	1-216-093-00	RES, CHIP	68K	5%	1/10W
R53	1-216-073-00	METAL CHIP	10K	5%	1/10W
R54	1-216-073-00	METAL CHIP	10K	5%	1/10W
R55	1-216-073-00	METAL CHIP	10K	5%	1/10W
R56	1-216-093-00	RES, CHIP	68K	5%	1/10W
R57	1-216-081-00	METAL CHIP	22K	5%	1/10W
R58	1-216-093-00	RES, CHIP	68K	5%	1/10W
R59	1-216-073-00	METAL CHIP	10K	5%	1/10W
R60	1-216-073-00	METAL CHIP	10K	5%	1/10W
R61	1-216-073-00	METAL CHIP	10K	5%	1/10W
R62	1-216-085-00	METAL CHIP	33K	5%	1/10W
R63	1-216-073-00	METAL CHIP	10K	5%	1/10W
R64	1-216-073-00	METAL CHIP	10K	5%	1/10W
R65	1-216-073-00	METAL CHIP	10K	5%	1/10W

RF **SW**

Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV14	1-238-091-11	RES, ADJ, CERMET 22K	
		< SWITCH >	
SW11	1-762-946-12	SWITCH, PUSH (1 KEY) (CHUCKING END DETECT)	
SW12	1-762-946-12	SWITCH, PUSH (1 KEY) (SAVE END DETECT)	
**********			
*	1-664-104-11	SW BOARD	
		*********	
		< SWITCH >	
SW1	1-572-688-11	SWITCH, PUSH (1 KEY) (LIMIT)	
**********			
		MISCELLANEOUS	
		**********	
3	1-664-628-11	JACK FLEXIBLE BOARD	
165	1-664-627-11	MAIN FLEXIBLE BOARD	
210	1-664-626-11	OP FLEXIBLE BOARD	
⚠211	8-820-010-05	OPTICAL PICK-UP KSS-521A/J2RP	
252	1-777-519-12	CORD (WITH CONNECTOR) (POWER) (US, Canadian)	
252	1-777-519-31	CORD (WITH CONNECTOR) (POWER) (EXCEPT US, Canadian)	
F1	1-532-731-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A/32V)	
F2	1-532-798-11	FUSE (BLADE TYPE) (AUTO FUSE) (1A/32V)	
M101	A-3291-956-A	MOTOR SUB ASSY, SPINDLE	
M102	A-3291-955-A	MOTOR SUB ASSY, SLED	
M103	A-3301-123-A	ELJ MOTOR ASSY (CHUCKING)	
M104	A-3301-123-A	ELJ MOTOR ASSY (ELEVATOR)	
**********			
		**********	
		HARDWARE LIST	
		**********	
#1	7-627-852-07	SCREW, PRECISION +P 1.7X2.5	
#2	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#3	7-685-781-09	SCREW +PTT 2X4 (S)	
#4	7-624-104-04	STOP RING 2.0, TYPE-E	
#5	7-627-554-07	SCREW, PRECISION +P 2X2.2	
#6	7-628-253-00	SCREW +PS 2X4	
#7	7-627-553-27	SCREW, PRECISION +P 2X2.5	
#8	7-624-102-04	STOP RING 1.5, TYPE-E	
#9	7-627-850-28	SCREW, PRECISION +P 1.4X3	
#10	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE3	
#12	7-685-780-09	SCREW +PTT 2X3 (S)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-473-611-11	WIRED REMOTE COMMANDER (RF) (RM-X57) (US, Canadian)	
	1-473-611-31	WIRED REMOTE COMMANDER (RF) (RM-X57) (EXCEPT US, Canadian)	
	1-473-612-21	WIRELESS REMOTE COMMANDER (RM-X58) (US, Canadian)	
	1-473-612-41	WIRELESS REMOTE COMMANDER (RM-X58) (EXCEPT US, Canadian)	
	3-865-015-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH) (US, Canadian)	
	3-865-016-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH) (US, Canadian)	
	3-865-030-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE) (E)	
	3-865-030-21	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)	
	3-865-030-31	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN) (AEP, UK)	
	3-865-030-41	MANUAL, INSTRUCTION (GERMAN, RUSSIAN) (German)	
	3-865-031-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, CHINESE) (E)	
	3-865-031-21	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE) (AEP, UK)	
	3-865-031-31	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN) (AEP, UK)	
	3-865-031-41	MANUAL, INSTRUCTION, INSTALL (GERMAN, RUSSIAN) (German)	
	9-939-196-01	HOLDER, BATTERY (for RM-X58)	
	A-3291-950-C	MAGAZINE (250) ASSY	
**********			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
501	3-011-778-01	BRACKET (705)	
* 502	X-3369-824-1	SCREW ASSY	
503	1-777-519-12	CORD (WITH CONNECTOR) (POWER)	(US, Canadian)
503	1-777-519-31	CORD (WITH CONNECTOR) (POWER)	(EXCEPT US, Canadian)
504	1-590-874-11	CORD, CONNECTION (RCA PIN CORD 5.5m)	
505	1-590-519-21	CORD (WITH CONNECTOR) (BUS CABLE 5.5m)	(US, Canadian)
505	1-590-519-81	CORD (WITH CONNECTOR) (BUS CABLE 5.5m)	(EXCEPT US, Canadian)
506	not supplied		
507	4-916-258-01	TAPE, MAGIC (for RM-X58)	
F1	1-532-731-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A/32V)	
F2	1-532-798-11	FUSE (BLADE TYPE) (AUTO FUSE) (1A/32V)	



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